
NABANITA DE

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SKILLS

- Java, Python, SQL, C, C#, R, HTML, Scope, Hive, Javascript, Spark, Scala, Golang
- Jupyter Notebooks, Cosmos, Excel, Databricks, SQL Server, SSMS, PowerBi, SSRS, Xflow, Weka, Matlab, Netbeans, Visual Studio, AutoCAD, Wireshark
- Azure Machine Learning, Azure, AWS, GCP, Cosmos, Kusto, PowerBi, Databricks, SSRS, Data Factory, HDInsight - Spark, Linux, Tensorflow, Bot Framework, Windows, Mission Control, Xml, Kusto, TLC, Scope Studio, Databricks, Augur, ScikitLearn, Amazon Web Services, S3, Google Cloud Platform

WORK HISTORY

Cloud Security Engineer, 04/2020 to Current

Uber – Seattle, United States

- As a part of the Threat Response team, working on intersection of Data Engineering/Analytics, Machine Learning, Software Engineering and Security to build Software Engineering tools which protect Uber's Security infrastructure, leveraging Amazon AWS and Google Cloud Platform.
- Recipient of **Uber Rockstar Leadership Award 2020**. Led Company wide Data classification, Privacy, Compliance and Machine Learning efforts and **reduced attack surface by 29%**. Was successful in making 1500 cloud resources compliant and **saved over 8.8 Million dollars per year for Uber in 3 months**. Worked cross-functionally with all teams of Uber including Data Privacy, Legal and Dev teams.
- **Winner, Uber Threat Detection and Response Hackathon 2020** - Built a production functional slack chatbot, utilizing Natural Language Processing, which automates the Cloud Security on-call responses, reduces customer response time for ops team, enhances customer experience and helps us secure our cloud resources faster.
- Contributed These Ideas which are now Products at Uber: **Uber Connect, Uber Grocery Delivery and Uber Book By the hour**.
- **Diversity and Inclusion** - Involved in Uber's Partnership with NGO **SuperPosition** for **second Uber Mentorship Program** aimed at **girls in high school and college** as **outreach ambassador and mentor**.

Founder, 12/2020 to Current

Returns.info

www.returns.info is a **non-profit initiative**, aimed to **help women to get back to work** after a long haul in career. By providing free resources, it is empowering stay at home parents to be career Champions - www.facebook.com/Returns.info

- **TGBA Entrepreneur of the Year 2021** Finalist (Results out in May'21)

Public Relations Ambassador, 01/2021 to Current

Rent The Runway

Working as a social media content creator and public relations ambassador for Rent the Runway.

Founder, 11/2016 to Current

Project FiB

- Led a team to build a Fake news detecting Chrome extension "Project Fib", **Google Moonshot Prize** winner at HackPrinceton 2016
- Featured on **Business Insider, Washington Post, The Next Web, Mashable, Huffington Post, Microsoft Blog, Wired, Hacker News, Fortune, CNN, BBC, CBS, CBC News, Bloomberg TV, Boston Globe** and **over 90% news publications worldwide** - <http://projectfib.azurewebsites.net/>
- Invited to "**Forbes 30 Under 30 Conference**" 2017 by Forbes Team for the work
- **50K User Requests per min, 650 stars on Github and 20K Dev views on Github page on 1st week**
- Won **Grinspoon Entrepreneurial Concept Award 2017**
- **Redhat Women in OpenSource Academic Award Finalist 2017**

Software Engineer, 07/2017 to 12/2019

Microsoft – Redmond, United States

Cloud and AI Data Intelligence Team

Data Engineering and Analysis

- Collaborated with cross-functional Development and Program Management teams to garner requirements and feature brainstorming and worked on data migration (on-premise to Cloud), automation of big data pipelines, collection, aggregation, processing, GDPR tagging, maintaining, analyzing and data visualization of terrabytes of active telemetry data streams to provide platform insights for making data driven product decisions and debugging product error causes for 500 Million+ users for Windows
- Enabled Data team to intuitively measure Windows product health, progress, success and insights through identifying, creating, onboarding and monitoring meaningful and impactful 250+ measures, dashboards and automated reports, sent to Senior Leadership daily and brought down metadata authoring issues by 21%
- Tools: Spark, Jupyter Notebooks, Cosmos, Scope, SQL, Excel, Databricks, SQL Server, SSMS, Xflow, PowerBi, SSRS, Visual Studio, Mission Control, C#, Xml, Python, R, Kusto, Xflow, Scala

Data Science and ML

- Worked closely with the Dev team to identify important features and conducted several ML experimentations. Implemented and integrated Natural Language Processing and Machine Learning end-to-end ML models for various projects and identified significant features contributing to ML predictions to provide insights on product behavior, forecast, customer uptake and cause of errors
- Conducted Data Studies and used statistical measures to devise effective ways to sample yet correctly represent terrabytes of data for effective data analysis, reducing processing time by 90%

- Intern Mentor for Machine Learning and Data Science Projects
- Tools: Azure Machine Learning, Jupyter Notebooks, Python, C#, Augur, TLC, Scikit-Learn, Pyspark, Cosmos, ScopeML, Scope, Datalake, R

Team Outreach Machine Learning Efforts

- Wrote ML Conference paper which was accepted to Machine Learning and Data Science Conference
- Presented Machine learning Posters at Windows Devices Group AI Presentation Day and AI Immersion Day 2017 and 2018

Hackathons

- Built a shippable snake game for the Windows Updating blue boot screen to promote User engagement and distraction for Updates which take a long time. Shipped in next iteration of Windows (2019)
- Won **3rd place at Microsoft's Global Hackathon Oneweek Worldwide (2017)**
- Won **1st Place at Microsoft Hack for Good (2018)** - Worked for NGO "Seattle Against Slavery" for disrupting Human Trafficking in Seattle. Built a Chatbot using Cortana Skills for information from the project website and further helped building their PowerBI Dashboards
- **Winners, Theme: Games for Our Future Game Jam (2019)** - Built a Virtual Reality experience for Oculus Go. Rendered voice to the game character. (<https://earthlab.uw.edu/2019/05/games-for-our-future-game-jam-re-cap/>)
- **Winners, Angelhack Capital One DevExchange Hackathon (2018)** - Built a Cortana skill to facilitate money transfer between Family using the Capital one money transfer API

Diversity and Inclusion

- Volunteered at the Microsoft Grace Hopper Recruiting booth and events (Coddess), the Technology Showcase booth (Showcasing Hololens and Xbox) and at International Womens Day 2018
- Deeply involved with Diversity and Inclusion org for Women in Windows Servicing and Delivery (WSD), gave talks at Womens Connected Group
- Taught classes how to code for Digi girls, Girls who code and TEALS

Initiatives

- Started Shark Tank Group at Microsoft, leading team of over 100 Software Engineers, PMs and Designers to pitch, brainstorm and materialize new product ideas for Microsoft
- Volunteered for Special Olympics as a judge for the Robotics Competition for Microsoft
- Started Interns Turned FTEs providing a platform to bring together over 350+ new hires
- Worked as an Intern Social Coordinator Leader for Camp Microsoft to host events for over 200 Grad Interns

Software Engineering Intern, 07/2016 to 09/2016

Microsoft – Redmond, Washington

- Drove automation of data collection & transformation pipeline from various on-premise telemetry streams to Cloud, on the **Windows Servicing & Delivery Data Analytics team**, for future iterations of Windows Updates predictive models
- Collaborated with the **Windows Devices Group Datascience team** and Implemented Windows updates predictive models for various updates revisions(including the anniversary update) with **88% Accuracy** after extensive feature selection experimentations on Azure Machine Learning & Azure HDInsight (Apache Spark MLlib on Jupyter Notebooks), utilizing the built telemetry dataset
- Recipient of **Microsoft Travel Scholarship for Grace Hopper Celebration of Women in Computing 2016**.

Microsoft Student Partner, 11/2013 to 05/2017

Microsoft – Dubai, UAE And Massachusetts, US

- Recipient of the best **Microsoft Student Partner Dreamspark Execution Award** for being the most active MSP for marketing & tech
- Held various workshops, teaching students cloud services like Azure and AI tools like Azure Machine Learning, how to build chatbots etc & volunteered for Microsoft Annual Roadshow
- Organised Annual Umass Data Science Hackathon Hack20
- Developed & published Windows Phone apps like "Missing MH370" and "**Bluetooth Messenger**" on Windows Store. Bluetooth Messenger hit more than **10,000 downloads in first 3 weeks**. (<http://www.windowsphone.com/en-US/store/publishers?publisherId=Nabanita&appId=ab8dfb50-11c7-4d0d-b5ea833cfa157eea>)

Research Software Development Engineering Intern, 07/2014 to 08/2014

Microsoft Research ATL – Cairo, Egypt

- Implemented an **US state level Location Inferring Classifier for Twitter Users** with 60% accuracy for **Project Trupil** (<http://research.microsoft.com/en-us/projects/trupil/>), lead by the **Social Analytics Team**. This SVM Classifier, built with 5.1 million user tweets, uses the text content of the User's tweets (indicator of dialect of the region), time-of-tweeting as the main features and reverse geocoded latitude-longitude info of the location tagged tweets as class labels

Software Engineering Intern, 02/2015 to 07/2015

Paramount – Dubai, UAE

- Built a **virtual IT technology test lab** for the company, by installing and virtualizing various OS & configuring networks in the Data Center using **Juniper SSL VPN, No-IP and VSphere ESXI**
- Implemented **Spam-Ham Filter Classifier** on Azure Machine Learning with **92% accuracy**. Spam-ham dataset consisted of retrieved spam/ham emails from my Gmail & Yahoo accounts with focus on features like time/day, sender info, attachment info as well as mail content
- Retrieved and processed data from over 1500 companies details from Dubai Financial Center website using Java & HTML Parser
- Worked **cross-functionally** with *Finance Department* on generating LPOs & reports, with *pre-sales team* on designing product bundles recommender systems, with *Sales Team* on product cold-calling, with *post-sales team* on Customer Engagement Research - driving Business Decisions, with *HR Department* on generating & monitoring Employees Database, writing Job Descriptions & scheduling interviews & retrieving HBR & Mckinsey Data. Exhibited at GISEC event as well as on Onapsis SAP Security event on behalf of Paramount

Junior Data Analyst, 09/2014 to 10/2014

Palm Square International – Dubai, UAE

- Implemented automation of data cleaning and correction for the database of Project "Yalla Spree" - online shopping website

IT Trainee and Consultancy Intern, 06/2013 to 08/2013

CEM Business Solutions – Dubai, UAE

- Leveraged the product based training on Cloud Based Microsoft Office 365 and Business Intelligence softwares like Microsoft Dynamics CRM, ERP - AX & CEM AX Payroll, to interact with Customers and generate leads & opportunities with the Telesales department and further generate reports
- Designed the Company's Cloud Services branch website.

EDUCATION

Master of Science: Computer Science

University of Massachusetts Amherst - Amherst, Massachusetts

- **Facebook F8 Scholarship 2017**, Facebook
- **Facebook Travel Scholarship 2016 & WiCys Scholarship** for Women in Cybersecurity (WiCys) 2016 & 2015 Conference
- **2015-2016 International Student Tuition Waiver Award**
- **Microsoft Grace Hopper Celebration of Women in Computing 2016 Travel Scholarship**
- **WECode (Women Engineers Code) 2017 & 2016 Student Scholarship**
- **Redhat Women in Open Source Academic Award 2017** - Finalist
- **Techcrunch Disrupt Hackathon Qualifiers 2017**
- **Best Up&Coming Hacker Award and Most Refined Mobile Virtual Reality Experience Category Award** sponsored by Qualcomm at Virtually Reality Hackathon (Oct 2016) at MIT Media Lab
- **NCWIT AspireIT Program Grant for SheHacks** - Served as a partner - Program Manager for UMass Amherst non-profit board, to craft a summer coding training program for teaching girls at a local high school at Amherst, how to code
- **1st Position, Hack for Healthcare startup hackathon (Aug 2016)** in Seattle, by **Kal Academy** and **Microsoft Leap Program**. Our project is funded by Microsoft Bizspark plus program - MSDN + **125,000\$ Azure Credits**. ([http //www.jackiedilorenzo.com/ui-design /#/hackforhealthcare/](http://www.jackiedilorenzo.com/ui-design/#/hackforhealthcare/))
- **Women in Machine Learning Travel Scholarship 2015**. Poster "Object Recognition using Machine Learning Techniques" accepted to WiML 2015. ([http //wiml2015.weebly.com/list-of-poster-presenters.html](http://wiml2015.weebly.com/list-of-poster-presenters.html))
- **Anita Borg Grace Hopper Celebration of Women in Computing India 2015 Student Scholarship**
- **Teaching Assistant** - Grader - Graduate level "Logic in Computer Science" Class
- **Mentor & Judge, HackMIT 2016** @Massachusetts Institute of Technology
- **Social Media Chair, UMass CS Women Group** - Mentoring upcoming graduate students for the WW2A Mentoring Program
- **Graduate Student Senator(GSS), Computer Science**, UMass Amherst & Member, GSS Finance Committee. Liason between CS department & student senate to solve departmental problems and deciding funding for on-campus organizations. Member of the UMass Amherst CS Dean Search Committee
- **Graduate Liason for Significant BITS**, UMass CS Publication

Bachelor of Engineering(Hons): Computer Science (GPA: 3.85/4; Major GPA : 3.9/4)

Birla Institute of Technology And Science, Pilani - Dubai

- Recipient of **CEL BITSAA Mantra Entrepreneur of the year Award 2014** for excellence in the field of Entrepreneurship. My **startup app** - "**Bluetooth Messenger**" hit **10,000 downloads in 3 weeks** on the Windows app store on 2015 & was in top 6 in New & Rising Category
- **Professional Teaching Assistant**, Object Oriented Programming Lab - Taught a class of 50, code java on Linux Environment
- **Winner, IEEE Student Paper Contest**, Computer Science Category; Selected as **top Microsoft Research Graduation projects** and top 10 undergraduate research projects in UAE along with 3 of my other Artificial Intelligence projects at UGSRG 2014 & 2015
- **Winner, Paper Presentation**, Computer Science Category
- **IEEEExtreme Coding Challenge 2014** - Secured Country rank - 8
- **Best Chess Player Award**, BITS Pilani Dubai Campus (Batch 2011 - 2015) and **Best Inter-University Chess Women Player Award** - Manipal University Sports Fest 2014 - 7 gold medals in Chess

PROJECTS

ID-FREE - Combines Biometric Virtual ID Auth for users and marketplace for Business - <https://medium.com/@tnabanitade/future-of-ids-in-washington-a9275081592b>

Masters Thesis : Detection of Fake News from Social Media. Built Fake news detector Chrome Extension "FiB", which was featured in Washington Post, Business Insider, Mashable, Financial Times, TheNextWeb, Hacker news, The Huffington Post, the Boston Globe, Microsoft Blog, CBC News, CNBC News, CNN News, BBC News, CNET etc. - [https://projectfib.azurewebsites.net/Social Media Analytics, Natural Language Processing & Machine Learning Space](https://projectfib.azurewebsites.net/Social-Media-Analytics,-Natural-Language-Processing-&Machine-Learning-Space)

- **Analyzing Twitter User Profiles, HackSmith 2016** - It involves analyzing User's personality based on user's Twitter profile given his/her twitter id, by looking at the texts & image content of User tweets to do Sentiment Analysis, Tweets Topic extraction, Named Entity recognition, political views extraction and language detection
- **Detection of Cyberbullying from Social Media using Machine Learning** - Given a set of tweets, the classifier model can detect with 78% accuracy if its an instance of cyberbullying or not
- **Music Recommendor based on User's Mood from Social Networking Sites** - Implemented a Music Recommendation system (Accuracy : 86%), which, given an User's Twitter UserID, predicts the User's mood & plays/recommends relevant mood song tracks mapped to Gaana.com
- **Text Analysis From Social Networking Sites** - Implemented a system that **generates trending topics** from current tweets through Twitter Streaming API. Performed **Sentiment Analysis** on tweets, retrieved by Twitter Rest API into positive, neutral and negative classes & also rating them on a scale of 1-5. Tools used : Stanford NLP, Alchemy API

Computer Vision, Bio-informatics & Machine Learning

- **Object Relation based Image Translation using Machine Learning** - Implementation of an images descriptor in Natural Language,

based on the location relationships of the Objects in the Image

- **Object Recognition using Machine Learning Techniques** - Implemented Supervised ML, unsupervised clustering Techniques and pattern matching through Matlab Computer Vision Lib for Object Recognition. Object classes, obtained from google, were manually labelled. Preprocessed by resizing images & extracting Speeded-Up robust features. Further Simulated by normalizing images with or without resizing
- **Implementation of Face Recognition using OpenCV** - Implementation of a Real Time (WebCam video based) Multi-Face Recognition system using Eigen Vectors Method & EmuguCV (Wrapper class of OpenCV)
- **Implementation of Clustering techniques on Diabetic Retinopathy** - Implemented and Compared performance (using cluster sum of square errors) of Clustering Algorithms – K Means, Fuzzy C Means and Hierarchical Clustering in clustering Diabetic Retinopathy dataset, using Matlab
- **"Simulation Studies on Face Recognition using BackPropagation Neural Network"** - Implemented an efficient Face Recognition system, utilizing normalized Euclidean distance formula between face points as features and Back propagation Neural Nets as the training algo & further stimulated parameters like learning rate, momentum & iterations to minimize recognition error & devise dependencies between each of these parameters.. Tools: Abrosoft FaceMixer & Neuroph studio. Paper was accepted at IENG Conference, Malaysia, 2014

Robotics : IFOR(Intelligent Flying object for Reconaissance), Technical team member - Worked on the GUI for automating functions of the quadrotor using Python, Pyside, Qt4 Designer and ROS & also on optimal Searching patterns(Exploration) for the Autonomous Quadrotor to pick up an object from a completely Unknown location within the least amount of time.**Security : Development of a Student projects portal using Homomorphic Encryption for Cloud Security** - Used Oracle Database server to save student records. Client side involved Homomorphic encryption and decryption of project marks through algo - Paillier cryptosystems.**Education** : Paper – “A NOVEL APPROACH TOWARDS DEVELOPMENT OF A CAREER MENTORSHIP SOLUTION THROUGH ACTIVE ALUMNI-STUDENT INTERACTION AND COLLABORATION” published at INTED'14 (8th International Technology, Education and Development Conference), Valencia, Spain. (<http://library.iated.org/view/SINHA2014ANO>)

RELEVANT COURSEWORK

- **AI** - Machine Learning, Deep Learning, Natural Language Processing, Computer Vision, Information Retrieval, Algorithms in Data Science, Systems in Data Science, Artificial Intelligence, Data Mining, Numerical Computing with Python
- **Statistics & Maths** - Probability & Statistics, Statistics I, Data Analytics & Visualization in R, Graphs & Networks, Discrete Maths
- **Business** - Principles of Management, New Venture Creation, Management of Cross Cultural Engineering Teams - "Global Innovation Practices" (Taught by University of Southern California)
- **Other Relevant CS courses** - Software Engineering, Parallel Computing, Cloud Computing, Distributed Operating Systems, Graphs & Networks, Design & Analysis of Algorithms, Computer Networks, Cyber-Security

ADDITIONAL LEADERSHIP POSITIONS

- **Masters Representative and Graduate Student Senator**, UMass Amherst - Attend various faculty hiring meetings and also bring forward & solve student issues in the department. Have been a part of the CICS Dean search committee as well as Graduate Student Senate's finance committee, handling evaluation and funding for organizations on campus.
- **Anita Borg Grace Hopper Artificial Intelligence committee** organizing volunteer - Helped reviewed applications for the Artificial Intelligence and ML community. Volunteered for GHC 2020 Open Source Day.
- **Fundraising Volunteer, United Nations** - Alleviating Poverty and helping crisis relief donations through Fundraising for children in Africa. Working as United Nations Food hero for United Nations Food Systems Summit 2021.
- **City of Seattle Representative, Empowering** - Was crowned Miss India Emerald city Washington 2020-2021 - Working on fundraising, doing crisis relief donations in city of Seattle and empowering women in the community.
- **Chief Financial Officer & Senior Editor, Center for Entrepreneurial Leadership (CEL), BITS Pilani Dubai Campus (September 2012 - July 2015)** - Have been the **founders of CEL and Conjure**, a CEL BITS Publication in 2012. **Organized more than 30 events** including **TEDx BPDC, The Indus Entrepreneur Talks, Business Quiz at Technofest'12**, established fund raiser initiatives and was actively involved in planning events as well as in registration drive (registered more than 60 members out of 120, singlehandedly). Been instrumental in **MoU signing** with Institute of Management Technology & **Incubators. Volunteered for SME World Summit.**
- **Public Relations Ambassador, IEEE (July 2014 - October 2015)** - As the sole & first IEEEExtreme Student Ambassador for IEEE Region R8 & R9, led the event's marketing drives on social media, was actively involved with registering teams & proctors, handling logistics as well as invigilating on the day of this 24 hour hackathon, which hosted 6,000 participants.
- **Managing Director, CV Chamkao (September 2014 - December 2014)** - My career counselling service startup through the New Venture Creation Course, focusing on 4 years of counselling service to students on opportunities to be taken to build that stellar Resume, pertaining to each Student's future plans. (Link - <http://yash04shah.wix.com/cvchamkao>). This Startup is based on the idea of my Education Research paper, published in INTED'14.
- **Student Ambassador at Mozilla Firefox, Go-Robo and Internshala Student Partner (July 2014 - July 2015)** - Led the sales & marketing drives and campaigns for these brands on Campus.
- **Organized BITSIAN Day , Kolkata, India Chapter 2015** - BITSIAN Day is a reunion alumni event which requires coordination with BITSAA. Was instrumental in starting the Kolkata Chapter and organized the first BITSIAN Day event in that chapter by reaching to BITS Alumni - graduated between 1965 to 2017).

CERTIFICATIONS

Security Engineering on Amazon Web Services 2020

Certificate in Java Programming Language using Java SE6, NIIT Kolkata, under Oracle WorkForce Development Program

Gesture Controlled Robotics Workshop, IEM Kolkata