

# SALONI SHAH

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## EDUCATION

### B.S. in Computer Science, Georgia Institute of Technology

Aug 2018 – May 2022

- **Concentrations:** Artificial Intelligence and Human Computer Interaction

### M.S. in Computer Science, Georgia Institute of Technology

Jul 2024 – May 2026 (Expected)

- **Concentrations:** Machine Learning

## SKILLS

- **Programming:** Python, C++, Java, JS, Swift, C, C# **Databases:** MongoDB, SQL | **Web:** Django, React, HTML, CSS | **Misc:** AWS, Linux
- **Relevant Coursework:** Artificial Intelligence, Combinatorics, Computer Organization & Programming, Computer Vision, Data Structures, Algorithms, Discrete Mathematics, Linear Algebra, LLMs, Machine Learning, Object-Oriented Programming, Statistics and Applications, UIs

## PROFESSIONAL EXPERIENCE

### Microsoft

#### Software Engineer / Azure Core – Autopilot Time Team

Aug 2022 – Present

- Architect and maintain the Network Time Protocol in C++ to ensure optimal time synchronization for Azure Virtual Machines
- Developed comprehensive dashboards to monitor and analyze offsets in real-time. Integrated an alert system to scan dashboards to proactively identify potential virtual machine (VM) outages, resulting in 20% fewer customer-reported offset incidents and 5% decrease in downtime
- Implemented an auto-healing feature to autonomously detect failing machines and repair or reboot VMs with no customer downtime
- Developed a **PowerShell** based optimization system to streamline Azure node recovery during incidents, resulting in decrease in revenue loss
- Act as the Designated Responsible Individual for the NTP service by responding to customer incidents and making necessary code fixes

#### Software Engineer Intern / Azure Core – Pilotfish Team

May 2021 – Jul 2021

- Automated the process of scheduling routine Azure cloud computing server hardware maintenances for 300,000+ servers
- Developed a client in C# to parse maintenance requests and interface with a maintenance API, enabling manipulation of server functionalities
- Enhanced the efficiency of the **PowerShell** scheduling application, resulting in a 50% reduction in overall processing time and error rate

#### Amazon Software Development Engineer Intern / Echo BSP

Jul 2021 – Oct 2021

- Designed, implemented, and tested a new feature using C++ and C# to enhance user experience on a specified subset of Echo devices
- Authored and presented a 15+ page design document to outline architecture, define usability, and analyze scalability to 15 stakeholders
- Collaborated with QA team to rigorously test and validate over 1500 lines of code, ensuring quality and functionality before deployment

#### Genesys Software Engineer Intern / iOS Team

May 2020 – Aug 2020

- Redesigning the iOS application with the XMPP Framework to enhance user experience and incorporate branding changes
- Integrated private key data encryption on messages in the communicate app utilizing **Swift**, **Objective-C** and **Firestore**
- Implemented a 3D-Touch feature that revealed a context menu for the Communicate app, accessible to a user base with 3,000+ consumers

#### Stackfolio (acquired JKHY) Software Engineer

Oct 2019 – Feb 2020

- Designed the user interface of the platform using **HTML/CSS** and **Django** and utilized **MongoDB**, **Python**, **jQuery** for backend changes
- Collaborated daily with the CEO, Head of Engineering, and the QA team to test and push features to production regularly
- Implemented a pre-purchase feature to prospect clients and developed an algorithm that autogenerates deal suggestions

#### Bits of Good Fullstack Developer (Volunteer) / PACTS

Oct 2019 – Feb 2020

- Built an interactive map using **Node**, **ReactJS**, and **Firestore** to connect users with behavioral health resources in the vicinity
- Developed a web-based portal using **MongoDB** and **ReactJS** to streamline the nonprofit project request application process

## PERSONAL PROJECTS

### Machine Learning for Pairs Trading

Jan 2021 – Apr 2021

- Processed a S&P 500 (2013 – 2018) dataset and utilized PCA, OPTICS clustering and ADF test to find cointegrated stock pairs
- Trained and ran lasso and ridge linear regression models using **Python** to predict a pair of stock's spreads to determine z-scores
- Utilized K-Fold Cross Validation and back tested the algorithm resulting in an increase in returns of 20.2% over the testing period

### Lyft Data Challenge

Aug 2019 – Sep 2019

- Analyzed 950,000+ data points to assess the value of a Lyft driver's projected lifetime value in terms of revenue generated
- Utilized **Python** to generate 15+ data visualization models by extracting features about average trip earnings and frequency

### BreadCrumbs

Aug 2019 – Oct 2019

- Developed an iOS application using **Swift** to decrease risks associated with traveling by tracking locations of users and reporting unusual trends
- Employed the Google Maps API to actively monitor the location of groups and alert group members of other members' positions

## LEADERSHIP EXPERIENCE

### Georgia Institute of Technology College of Computing (Undergraduate Teaching Assistant / Algorithms)

Jan 2021 – Dec 2021

- Held weekly office hours, assisted the professor in writing test and homework material, and graded exams of 150+ students
- Taught divide and conquer, dynamic programming, graph algorithms, complexity theory, NP-completeness, and Big O topics

### Georgia Tech Vertically Integrated Project (Team Lead / Machine Learning)

Aug 2019 – May 2021

- Led a team of 10 in creating a recommendation algorithm by training a neural network to output measures of 10+ features
- Utilized **Python**, **Scikit-learn**, **Pandas**, and **NumPy** to classify 14 comedians and 30+ categories from 9,000+ jokes
- Achieved 94.8% accuracy by employing K-Nearest Neighbor, Decision Tree, Naive Bayes, and LDA classifiers

### Bubble – Hyperlocal Chat (Product Manager)

Aug 2020 – May 2021

- Led a team of 15 in evaluating market landscape, value proposition, target users, and stakeholder groups of the application
- Collected and analyzed 1500+ data points to output product strategy with suggestions for UI improvement and marketing