Ghazanfar Shahbaz

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Education

Hunter College   **New York, NY**
Bachelor Of Arts, Computer Science, Minor in Philosophy and Math   August 2019 - June 2023
GPA: 3.83/4.0 GPA (Cumulative), 3.87/4.0 GPA (Major)
Relevant Coursework: DS & Algo, Natural Language Processing, Machine Learning, Computer Vision, Linear Algebra
Clubs: Google DSC, Hunter ACM, Open Source Club
Honors and Awards: Magna Cum Laude, Thomas Hunters Honors Program, Phi Beta Kappa, Cooperman Fellow, Dean's List

Research & Teaching Experience

Hunter College, Lab of Sarah Ita Levitan   **New York, NY**
Natural Language Processing Research Assistant   July 2024 - Present
- Reviewing current research to identify effective methods for robust zero-shot stance detection
- Replicating models from previous stance detection papers to deepen understanding of LLMs and their applications
- Conducting experiments to optimize stance detection model parameters using DANN and MoLe techniques

Undergraduate Natural Language Processing Research Assistant   January 2023 - August 2023
- Engineered a system to detect truth/lie speech by extracting key features from audio files
- Constructed an application to create human-sounding language audio files using *AWS Polly CLI*
- Automated survey creation with the *Google Form API* to track human ability to detect truth/lie speech

Hunter College, Lab of Susan L. Epstein   **New York, NY**
Undergraduate Machine Learning Research Assistant   August 2022 - August 2023
- Devised a system to skip plant watering using weather data and plant location with the *Farmbot API*
- Streamlined the process of saving Farmbot plant data to a remote server using *SQLAlchemy* and *Flask*
- Implemented a system to calculate the water pressure when giving plants water using *Arduino*

Undergraduate Machine Learning Research Assistant   September 2021 - June 2022
- Implemented a watershed-based algorithm for indoor navigation by breaking a map up into sections
- Proposed a method to calculate map complexity using features like the number of neighboring sections
- Developed a process of extracting information from cleaned maps using *OpenCV* and graph theory

Hunter College   **New York, NY**
Natural Language Processing Teaching Assistant   January 2023 - May 2023
- Guided students through their final projects, helping to overcome obstacles and developer innovative solutions
- Conducted weekly office hours to clarify complex NLP concepts and review quiz material
- Collaborated with a PhD student to assist in grading labs and quizzes, ensuring fair and thorough evaluation

Data Structures & Algorithms Teaching Assistant   September 2022 - May 2023
Intro to Computer Science Teaching Assistant -> Lead TA   February 2020 - May 2023
- Managed a 200-student lecture hall, addressing questions and supporting the lecturer
- Organized and facilitated review sessions and lab hours to address projects and clarify misunderstandings
- Assisted with grading and development of assignments, quizzes, and code checkers using the *Gradescope API*
- Onboarded and mentored new TAs, teaching effective instructional strategies and practices to support students
- Coordinated with instructors to develop and implement curriculum changes based on student feedback

Codepath   **New York, NY**
Cybersecurity Teaching Lead   January 2021 - May 2021
- Directed a team of 4 that secured a $10,000 scholarship for top enrollment figures and exceptional feedback
- Delivered cybersecurity lectures to 80 students weekly, ensuring mastery of core principles and project success
- Facilitated weekly office hours to address student questions and support their learning progress

New York Edge   **New York, NY**
Counselor   November 2018 - August 2019
- Instructed daily classes of 20-30 students with engaging lesson plans to enhance learning and personal growth
- Developed and executed engaging lesson plans to foster educational outcomes and foster personal growth
- Coordinated with teachers and staff to address student needs and track their academic and personal progress

Professional Experience

Bloomberg   **New York, NY**
Senior Software Engineer   June 2023 - Present
- Developed an automated insights platform using *TensorFlow* with formatted data, boosting function usage by 45%
- Designed a system to allow insights to be available across the terminal regardless of data format
- Maintained a backend service which calculates different statistical attributes for equities
- Partnered closely with stakeholders to build and enhance equity functions, resulting in higher customer satisfaction
- Facilitated agile development methodologies as Scrum Master, increasing teams organization and efficiency
- Launched a monthly knowledge share series to foster collaboration and contribution within the organization

Amazon   **New York, NY**
Software Development Engineer Intern   August 2022 - January 2023
- Implemented a backend service to prioritize features based on feature statistics in *AWS Cloudwatch*
- Logged feature statistics into *AWS CloudWatch* using *Apache Spark* and *Open Telemetry*
- Incorporated integration and stress tests to validate service logic and reliable response time using *Mockito*

Bloomberg   **New York, NY**
Software Engineer Intern   June 2022 - August 2022
- Engineered a system to track and display real-time user selection settings, improving interaction and experience
- Developed endpoints to save and retrieve previous selections using *SQL* and an in-house backend library
- Integrated endpoints to display recent selections in tabular form and update them in real-time

Software Engineer Intern   June 2021 - August 2021
- Constructed a relational database to perform CRUD operations using *SQLAlchemy*
- Automated testing to ensure backend logic accuracy and decrease development time using *pytest*
- Spearheaded the development of a frontend application to display unformatted data using an in-house library

UnitedHealth Group   **Remote**
Software Engineer Intern   September 2020 - December 2020
- Transformed a search query using *SQL* to *Elasticsearch*, improving runtime by 200%
- Replaced a legacy backend service to improve efficiency and runtime using *Spring Boot*
- Migrated an *Angular* frontend application that used to call legacy endpoints to *Spring Boot* endpoints

Software Engineer Intern   June 2020 - August 2020
- Designed a user interface with cost breakdowns of over 1,000,000 assets using *Angular* and *D3.js*
- Automated real-time data processing and cleaning workflows with *Pandas* to ensure data accuracy
- Implemented a *Spring Boot* framework which queried databases using *SQL* then sent data back in JSON format

Leadership & Activities

Bloomberg   **New York, NY**
Natural Language Processing Guild Event Manager   July 2024 - Present
- Collaborated with NLP researchers and professionals to secure engaging and informative speakers for guild events
- Oversaw event logistics, including scheduling, venue selection, technical setup, to ensure seamless event execution
- Gathered participant feedback to continuously to maintain and improve the quality and impact of future events

All Star Code   **New York, NY**
Mentor   June 2023 - Present
- Mentoring All Star Code alumni to advance their careers in tech or entrepreneurship
- Organizing daily meetings to provide tailored guidance, address career challenges, and support mentee progress
- Supporting students with projects and hackathons for All Star Code events to reduce blockers and enhance ideas

Hunter College, Google Developer Student Club   **New York, NY**
Core Tech Lead Treasurer -> DSC Lead -> Core Tech Lead, Advisor   August 2020 - June 2023
- Planned, coordinated, and taught Google technologies and frameworks to club members and other students
- Attended other developer student club events in order to learn about new technologies and implementations
- Managed and kept track of club expenditures and incoming revenue such as bills, reimbursements, and expenses

Skill & Interests

Research Interests: Text Summarization, Speech Synthesis, Computational Linguistics, Machine Translation

Interests: Tennis, Running, Piano, Boxing, Reading, Cooking, Rock Climbing

Coding Languages: Python, C++, Swift, Typescript, Java   **Frameworks:** Flask, Tensorflow, Pandas, Pytorch, SwiftUI

Query Languages: SQL NoSQL, Elasticsearch, MongoDb   **Professional Affiliations:** All Star Code, Codepath

Languages: Urdu (Native), Chinese (Conversational), Japanese (Conversational), Spanish (Advanced), French (Beginner)

Events: Greylock Techfair (2022, 2021), Facebook ABCS (2021), Codepath TA (2021), Goldman Sachs Possibilities Summit (2021), Goldman Sachs Insight Series (2020), Google CSSI (2019), All Star Code (2018)