Arnav Shah

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Education

Johns Hopkins University   Aug. 2022 – May 2024
Master of Science in Engineering in Computer Science, **GPA - 3.97/4.0**
Courses - Software System Design, Cloud Computing, Databases, Web Security, Information Retrieval, Blockchain,
Natural Language Processing, Machine Translation

Veermata Jijabai Technological Institute (VJTI), India   Aug. 2018 – May 2022
Bachelor of Technology in Information Technology, **GPA - 9.29/10**
Courses - Big Data Analytics, Data Mining & Warehousing, Machine Learning, Operating Systems, Computer Networks,
Parallel Computing, Cyber Security, Software Engineering, Algorithms

Technical Skills

Languages: Python, Java, SQL, JavaScript, C++, HTML, CSS
Tools and Technologies: Node.js, Spring Boot, REST APIs, Flask, React, React Native, Docker, PyTorch, TensorFlow,
Scikit-learn, Pandas, PySpark, Databricks, Elasticsearch, Apache Airflow, NumPy, Matplotlib, NLTK, AWS (EC2, ELB), Azure
(App), Git, Bitbucket
Databases: MySQL, PostgreSQL, MongoDB, Neo4j, AWS (S3, RDS)

Work Experience

Johns Hopkins Bloomberg School of Public Health   Oct. 2023 – Apr. 2024
Full-Stack Software Engineer
- Led the front-end development to implement interactive driver training and testing modules, achieving a 15% reduction
  in average page render time.
- Orchestrated the design of REST API endpoints, implemented user authentication, and contributed to database
  modeling, resulting in a 30% increase in throughput.
- Established a CI/CD pipeline using Microsoft Azure to deploy the application, benefiting over 2000 teen drivers in the
  state of Washington in anticipating road hazards.

Abbott   June 2023 – Dec. 2023
Data Science Intern, Global Data Science & Analytics
- Implemented a data analysis pipeline to identify proxies for assessing the efficacy of Deep Brain Stimulation in
  Parkinson's patients across over 10 billion medical device records, for submission to FDA and EU regulators.
- Developed interpretable and predictive machine learning models, achieving a 98% accuracy in forecasting heart failure
  stages by leveraging both insurance claims and EHR data.

Center for Language and Speech Processing, Johns Hopkins University   Nov. 2022 – Dec. 2023
Research Assistant, Advised by Prof. David Yarowsky
- Published a Python package for universal voice activity detection, demonstrating competitive performance with a 5%
  reduction in detection error rate compared to existing open-source models.
- Developed an algorithm to augment Automatic Speech Recognition (ASR) with Grapheme-to-Phoneme models,
  yielding a 3% improvement in phoneme error rate across 130 languages.

Citigroup   May 2021 – July 2021
Full-Stack Software Engineering Intern, Equities Technology Division
- Utilized the QuickFIX/Java library to integrate the "Financial Information Exchange" (FIX) protocol with a regression
  and load testing tool for Citi's in-house order management system–"One Connect".
- Incorporated WebSockets to pass messages between back-end microservices with an average latency of 60ms.
- Upgraded the JUnit test suite for various FIX message scenarios and brought the code coverage up to 92%.

Projects

DocuSync   June 2023
Realtime updates to product documentation using generative AI.
- Managed the back-end infrastructure, database design and LLM prompting using the OpenAI API.
- Contributed to the front-end development of a real-time, editable document-difference service with relevance ranking.
- Received 2nd place at the HackerDojo Generative AI Hackathon, with plaudits in the business use-case category.

Student System   May 2020
A web-based platform that links students, educators and alumni, facilitating the exchange of educational materials and
fostering community formation.
- Engineered the back-end architecture and database framework, crafting over 80 SQL queries to aid system functionality.
- Built a recommendation engine to track similar students and alumni with a MAP@5 of 94%.