

Avinash Vadivelu

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EDUCATION

Bachelor of Science in Computer Science Anticipated Dec 2024

The University of Texas at Dallas, Richardson, TX GPA: 3.60

Master of Science in Computer Science Anticipated Dec 2025

The University of Texas at Dallas, Richardson, TX GPA: 3.75

Relevant Coursework: Discrete Math for Computing, C/C++ Programming in Unix Environment, Computer Architecture, Data Structures and Algorithm, Software Engineering, Operating Systems, Machine Learning, Database Design, Big Data Management and Analytics, Web Programming Languages, Natural Language Processing, Object-Oriented Analysis and Design

Work Experience

Software Engineer Intern | Java (Spring Boot), TypeScript (Angular), Azure, ServiceNow, Agile, Git May 2025 - Aug 2025

Bread Financial Plano, TX

- Analyzed and monitored over 10 legacy web services within a customer care application, identifying redundant mainframe data calls and recommending decommissioning strategies to reduce system load and improve performance.
- Managed and resolved incident tickets through ServiceNow, ensuring timely issue resolution and minimizing disruption to critical business operations.
- Investigated inefficiencies in legacy service architecture, enabling data-driven decisions for modernization initiatives and supporting early planning phases for transitioning data workflows to the cloud.

PROJECTS

Real-time Basketball Player Analytics Dashboard | Django, PostgreSQL, Angular, REST API, CSS, HTML

- Designed and implemented a dynamic player performance dashboard utilizing Angular for the frontend and Django for the backend, ensuring real-time synchronization between user-selected player data and summarized game statistics.
- Transported and organized approximately 800 lines of JSON data to a PostgreSQL database with the use of Django models.
- Optimized API integration by leveraging RxJS observables and BehaviorSubjects to ensure efficient and responsive data fetching, minimizing redundant network calls and enhancing application performance.

Automotive OSS Survey (Toyota Tsusho Systems) | Linux, Python, JavaScript, HTML, Git, Firebase, Agile, Jira, Confluence

- Researched the usage of Open-Source Software in the automobile industry with 5 other people.
- Reverse engineered 4 Firmwares to uncover various OSS/libraries within them and identify common vulnerabilities and exposures (CVE).
- Organized our findings and analysis on an easy-to-use dashboard/website that is hosted on Firebase.
- Participated in weekly team meetings where I was either a meeting leader or a scribe.

Stock Predictor | Python, Pandas, Scikit-learn, Matplotlib, NumPy

- Developed a Recurrent Neural Network (RNN) from scratch with a team of 4 that is capable of forecasting stock close prices based on historical data with an accuracy of 85%.
- Utilized Matplotlib to compare our model's prediction of the stock's close price with the actual data in the dataset
- Organized meetings and helped delegate tasks within my team on a weekly basis.

TECHNICAL SKILLS

Programming Languages: Java (Spring), C++, Python, TypeScript (Angular), JavaScript (React, Node.js), HTML, CSS, Bash

Technologies: AWS, Azure, Oracle Cloud, Databricks, SQL (MySQL, PostgreSQL), Apache (Hadoop, Spark, Kafka), Docker

Machine Learning: Pandas, Scikit-learn, Matplotlib, Seaborn, Pytorch, NumPy, TensorFlow

Software Tools: Agile (Scrum), Git, VS Code, IntelliJ, MSOffice, Jira, Confluence, ServiceNow