Vedansh Arya

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Education

Georgia Institute of Technology Atlanta, GA

Bachelor of Science in Computer Science *May 2026*

- Concentrations: Intelligence and Modeling/Simulations
- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Computer Organization & Programming, Systems & Networks, Machine Learning, Computer Vision, Deep Learning

Technical Skills

Languages: Java, Python, C/C++, JavaScript, TypeScript, HTML/CSS, SQL, R, Bash
Frameworks & Libraries: React, Node.js, Angular, Pandas, NumPy, Matplotlib, Keras, Scikit-learn, XGBoost
Cloud & Databases: AWS (CDK, CloudWatch, DynamoDB, Lambda, S3, EC2, API Gateway), Snowflake, Teradata

Experience

Amazon May 2025 - August 2025

Software Development Engineering Intern *Phoenix, AZ*

- Developed fullstack Promotion Management Console to modernize legacy deal validation system, utilizing Harmony UI framework in React-Typescript frontend, AWS infrastructure (CDK, Cloudwatch, DynamoDB), and a Java backend integrated with a secure token-authenticated API (AAA) for real-time promotion validation; launched as a new tool for both admin and DevOps users.
- Reduced validation processing time from 15 minutes to 1 minute (93% improvement) by replacing a legacy CSV-based system with a modern web interface, increasing operational efficiency by 63% for 1,093+ internal administrators
- Architected a scalable, rule-driven validation pipeline enforcing 30+ business rules through multi-stage transformations across 6+ data models. Seamlessly integrated with the Promotion Lifecycle Management (PLM) system to enable automated creation and management of promotions immediately after validation, ensuring data accuracy and demonstrating the architecture's scalability for future feature expansions.

Elevance Health May 2024 - August 2024

Data Science & Machine Learning Intern *Atlanta, GA*

- Engineered and optimized multiple classification models, including Decision Trees, Random Forest, Gradient Boosting, and SVM, utilizing libraries such as Scikit-Learn and XGBoost, to achieve prediction accuracy rates between 92.62% and 93.43% for identifying and flagging incoming Non-Par claims.
- Leveraged Snowflake and Teradata SQL to efficiently query and analyze 23 million claims from the Anthem database for data analysis and testing & training data mining
- Conducted three exploratory data analyses on previously queried claims via libraries Pandas, NumPy, Matplotlib, Seaborn and presented the findings in well formatted deliverables

Projects

Cancer Type Classification from RNA Sequencing Data | *Python* January 2025 - May 2025

- Developed deep learning model achieving 96% accuracy in classifying 6 cancer types using RNA sequencing data, implementing batch normalization, dropout regularization, and early stopping to prevent overfitting
- Implemented diverse machine learning approaches including supervised methods (SVM: 95% accuracy) and unsupervised clustering algorithms (DBSCAN, K-means) to explore different classification strategies for cancer type identification
- Applied preprocessing techniques to RNA sequencing data (20,000+ genes, 2,900+ patients), including SMOTE balancing, dimensionality reduction (PCA, t-SNE), and feature selection to identify 5,000 highly variable genes

Android Dungeon Crawler Game | *Java* August 2024 - December 2024

- Architected and developed a full-featured Android dungeon crawler game using Java and Android SDK, implementing MVC architecture and object-oriented design patterns to ensure clean separation of concerns and maintainable codebase
- Designed robust game engine with dynamic character progression system supporting 20+ unique character classes with distinct abilities and stats, while implementing comprehensive JUnit testing and Agile development workflow using Jira and Git for collaborative version control