

Aryan Kumawat

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Education

Virginia Commonwealth University

Bachelor of Science in Computer Science, Concentration in Software Engineering, GPA: 3.9

August 2022 – May 2026

Richmond, VA

Experience

Software Engineering Intern

Capital One

June 2025 – August 2025

Richmond, VA

- Developed a modular feature engineering library supporting imputation, encoding, scaling, discretization and benchmarking.
- Integrated the module with Pandas and PySpark as a reusable component within a Kubernetes pipeline, enabling scalable, containerized preprocessing across distributed machine learning workloads.
- Engineered the system for extensibility and high performance within the enterprise ML platform.

Software Engineering Intern

Cvent

June 2024 – August 2024

Tysons Corner, VA

- Engineered critical functionality for Meeting Request Forms using React and TypeScript, implementing complex validation logic across integrated systems.
- Architected search algorithms to traverse and validate question hierarchies, preventing system errors for 1000+ clients.
- Designed user-friendly confirmation dialogs, reducing unintended deletions of crucial form elements by ~25%.

Healthcare Sector Head, Investment Analyst

VCU Student Managed Investment Portfolio

February 2024 – present

Richmond, VA

- Lead healthcare sector coverage and investment strategy within a \$400K portfolio.
- Direct stock selection, team collaboration and sector research using Bloomberg Terminal and financial models.

Software Engineering Intern

Federal Reserve System

May 2023 – August 2023

Richmond, VA

- Enhanced Microsoft Edge web driver for test automation, using Java and Spring Boot, enabling QA engineers to configure the browser, and developed 10+ reusable methods in Selenium for complex scenarios, reducing testing time by ~15%.
- Engineered over 10 automated test scripts and refactored legacy codebase, identifying and resolving 6 critical bugs, improving the overall testing framework and software quality.

Lead Instructor

Fairfax Collegiate

June 2022 – July 2022

Fairfax, VA

- Developed and led engaging curriculum for Robotics and Web Development courses, teaching HTML, CSS, JavaScript, jQuery, and Git to middle school students.

Machine Learning Research Intern

Dartmouth College

June 2021 – August 2021

Hanover, NH

- Built a comprehensive solution to streamline Mohs surgery, a skin cancer removal procedure.
- Created 3D point cloud and model viewing interface using Three.js, and image segmentation models with TensorFlow.
- Achieved up to ~30% time savings via improved communication and workflow.

Projects

RamShare | PHP, SQL, HTML/CSS/Javascript

April 2024

- Devised full-stack web application that connects VCU students to arrange carpools for holiday travel to hometowns.

Othello AI Bot | Python, Minimax, Alpha-beta pruning

June 2021

- Developed an AI bot for Othello, achieving a win rate of over 90%.
- Designed a heuristic evaluation function considering mobility, corner capture, piece count, and positional advantages.

SeniorShield | Python, OpenCV, Raspberry Pi, Swift

May 2021

- Developed a mobile application to enhance safety for cognitively impaired senior citizens, integrating real-time monitoring and alert systems.
- Engineered facial recognition system using OpenCV on a Raspberry Pi camera to identify unknown visitors, increasing home safety and security.

Technical Skills

Languages: Java, Python, C, JavaScript, HTML, CSS, PHP, SQL

Frameworks and Libraries: React, Node.js, Jest, Flask, JUnit, Cucumber, Selenium, Maven, Scikit-learn, Pandas

Technologies: Linux, Bash, Git, Jenkins, Kubernetes, Apache Spark, IOT, AWS (Lambda + S3), MySQL, Arduino