

AYAAN KUMAR

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EDUCATION

University Of Washington

Major: Bachelor of Science, Informatics

2024 - 2027

- GPA: 4.0 | Dean's List 2024-2025
- Relevant Coursework: Calculus I, II, III, Intro to Computer Science, Data Structures & Algorithms I, II, Software Engineering, Discrete Math, Intro to AI, Computers & Society
- Clubs & Experience: AI Collective, DubHacks, Association for Computing Machinery, and HackRover.

SKILLS AND FRAMEWORKS

Programming Languages: Java, JavaScript, HTML, CSS, Python, C, C++, SQL, TypeScript

Frameworks: React, Node.js, TailwindCSS, Pandas, Flask

Tools & Technologies: AWS, Git, Linux, GitHub, MySQL, Firebase/Firestore,

Concepts: Computer science, Software development, Backend development, Object-Oriented Programming (OOP), Data Structures, Algorithms, Social Programming, Agile Methodologies, Machine Learning, Scalable Systems

EXPERIENCE

Software Engineering Intern - House of Wisdom

Redmond, WA

June - Sep 2025

- Spearheaded backend development for a tutoring management portal serving over **200+** students and tutors enabling user registration, class scheduling, and attendance tracking
- Developed and deployed a secure clock-in/clock-out system using Firebase, streamlining tutor shift tracking and increasing administrative efficiency by **35%**.
- Designed scalable **REST APIs** using **Flask** and **Firebase** to manage real-time class data, ensuring consistent and reliable backend performance while leveraging **Google Calendar and Google Sheets APIs** to automate scheduling, reducing work by **50%**.
- Collaborated with cross-functional teams (product, frontend, and admin stakeholders) to ship weekly feature updates, improving user satisfaction and retention.

Free Lance Developer

Remote

Jun 2024 - Present

- Delivered over **15** responsive websites using HTML5, CSS3, JavaScript, and React, improving performance by **30%** through lazy loading and efficient state management.
- Improved user engagement through intuitive **UI/UX** designs that align with client requirements, increasing user engagement by **40%**.
- Integrated **AWS** and **EmailJS** for enhanced communication for the client and customer, boosting contact form conversions by **25%**.
- Implemented **TailwindCSS** for creating responsive, mobile-friendly, and scalable web designs ensuring robust front-end development.

PROJECTS

Breast Cancer Classifier

- Developed a **K-Nearest Neighbors model** on a dataset of **569 patient records** to classify tumors as benign or malignant with **94% validation accuracy**.
- Built an interactive **data-visualization dashboard** (Java) enabling clinicians to view classification outcomes and feature correlations in real time, reducing manual analysis time by **~50%**.

S&P500 Predictor

- Trained a **Random Forest model** on **10+ years of historical index data (2M+ rows)** to forecast daily market direction with **>70% test accuracy**, generating an estimated \$18,000 simulated profit over a 5-year back-test period.
- Engineered a **Python pipeline** (NumPy, pandas, scikit-learn) for data ingestion, feature engineering, and automated back testing, cutting model iteration time from **hours to minutes**.

Career Quest – Interactive Career Planner for Kids

- Built an AI-powered web app that helps children explore careers by providing guided questions, tailored career and “day in the life” simulations for **50+ unique professions**.
- Integrated **Gemini API** to produce tailored recommendations and generate realistic images boosting session engagement by **65%** during prototype with **10+ users**. Implemented efficient **JSON-based API handling** and responsive **TypeScript frontend**, reducing load times by **35%**.