RAGHAV AHUJA

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EDUCATION

Simon Fraser University, Vancouver, BC, Canada — **Expected: May 2026**

Bachelors of Science, Computer Science — ***(GPA: 3.2)***

Minor: Economics

Bal Bharati Public School, India — **Apr 2018 – March 2020**

Courses: Physics, Chemistry, Mathematics, Computer Science — (***CGPA: 4)***

TECHNICAL SKILLS

Core:	Data Structures and Algorithms, Operating Systems, Agile Software Development, Machine Learning
Programming Languages:	Python, JavaScript, C/C++, Java, C#, SQL, R, GoLang, Bash
Web Technologies:	React.js, Node.js, HTML, CSS, SASS, Flask, FastAPI, Restful API, Next.js, TypeScript, Angular
DevOps/Cloud Tools:	Jenkins, Jira, Git, Postman, Kubernetes, Docker, Kafka
Database:	MySQL, MongoDB/NoSQL, Firebase, Postgres
Libraries:	Pandas, NumPy, TensorFlow, Spring, Swing, Jest, JUnit, Bootstrap,

PROFESSIONAL EXPERIENCE

Software Engineer Intern, DaVinci Corps, India — **Jan 2023 - May 2023**

- Designed and implemented "**DevOpsArk**", a **Django** and **React**-based platform for optimization of **DevOps** pipelines through dynamic content delivery and real-time updates via **WebSocket**, significantly improving operational efficiency.
- Developed robust **Python REST APIs** secured with **JWT** and utilizing **JSON** for data serialization, leading to a 40% reduction in unauthorized access and bolstering platform scalability with **Docker** Containerization and automated **CI/CD** pipelines
- Created an innovative **Role-Based Access Control System** using **Flask-RBAC** and **SQLAlchemy**, which streamlined user permissions and access management, setting a new standard in access control.
- Enhanced performance improvements and search capabilities by 30% with **Kafka** and **Elasticsearch** integration, reducing manual oversight and manual documentation
- Optimized deployment and infrastructure management workflows using **GitLab CI** and **Kubernetes**, significantly enhancing deployment frequency and ensuring system stability through advanced automation and orchestration techniques.

PROJECTS

Bank Management System — **Jan 2024 - Mar 2024**

- Increased API response times by 40% by optimizing **FastAPI** routes and **Python** asynchronous operations, improving banking operation efficiency.
- Achieved 30% better **database** scalability through advanced **PostgreSQL** optimizations, enhancing transaction handling capacity without sacrificing performance.
- Reduced feature development cycle by 25% using FastAPI's testing with **CI/CD** pipelines, speeding up iterations and deployment efficiency.

Image Editor — **Apr 2023 - Sep 2023**

- Developed a detail-oriented **Java Image Processing** application with custom pixel manipulation algorithms, leveraging **Object-Oriented Programming**, **MVC**, and **Java Swing** for an advanced, robust architecture
- Streamlined back end development and test engineering with **Spring Boot** and **JUnit**, and **GitHub** integration to enhance collaboration, quality and communication skills
- Achieved a 70% improvement in image processing speed metrics by optimizing pixel manipulation algorithms in a **JavaFX** application, leading to quicker image analysis and enhanced the UI through advanced GUI capabilities

Medi-Guide: Generative AI Engineer (Healthcare Chatbot Development) — **Jan 2024 - May 2024**

- Developed an **RAG LLM** based medical chatbot, employing **Streamlit** for UI. Utilized **LangChain** to optimize **language modeling** and **prompt engineering** for interactions with **OpenAI API** with a potential to reduce patient emergency consultation wait times
- Delivered immediate analysis and intelligent follow-ups through **Gen AI** by leveraging **GPT-3.5 Turbo's** capabilities

Garbage Detection Model — **Jan 2021 - May 2021**

- Designed an innovative solution in the information technology domain, an AI-powered garbage detection model using **TensorFlow** and **OpenCV** for advanced image processing.
- Integrated a **Flask** based web application with a **React** frontend for user-friendly image submission, employing **Docker** for deployment and **Git** for version control, enhancing user engagement and ease of access.