# 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

## PROJECTS

🔗 **PodcastAI** *MERN, Firebase, OpenAI, GCP, Heroku*                    **Sep 2024 - Nov 2024**
- Created an innovative application using the **MERN** stack to convert documents into engaging podcasts, enabling users to easily generate audio content in multiple languages. Achieved this by implementing **OpenAI** for script generation and **Google Cloud Text-to-Speech**, significantly improving content accessibility.
- Built and deployed user authentication and real-time data storage using **Firebase**, resulting in secure and seamless user access to personalized podcast content, which boosted user retention and data security.
- Enabled document-to-podcast conversion in multiple languages, utilizing **OpenAI** and **GCP Text-to-Speech**. This improved user engagement and accessibility, helping users consume content more flexibly and driving up user interaction with the platform by **30%**.

🔗 **AI- Based Job Portal** *NLP, React, Latex, Express, Firebase, Mongoose, ML*                    **May 2024 - Aug 2024**
- Reduced job search time by 30% for users, as measured by average time-to-application, by implementing an **AI-powered job matching algorithm** using **Natural Language Processing (NLP)** in a **MERN** stack job portal.
- Increased application completion rate by 25%, as measured by the ratio of started to submitted applications, by developing an integrated resume builder with **LaTeX template integration** for professional PDF generation.

Improved overall user engagement by **40%**, as measured by daily active users and session duration, by creating a responsive **React front-end** with real-time notifications and personalized job recommendations.

**Bank Management System** *FastAPI, Python, PostgresSQL, CI/CD,*                    **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.

**Medi-Guide: Generative AI Engineer** *RAG LLM, OpenAI, Streamlit, LangChain, GenAI*                    **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

## PROFESSIONAL EXPERIENCE

**Software Engineer Intern, DaVinci Corps**                    **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

## TECHNICAL SKILLS

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|---|---|
| **Core:** | Data Structures and Algorithms, Agile Software Development, Machine Learning, Data Science |
| **Programming Languages:** | Python, JavaScript, C/C++, SQL, R, GoLang, Bash, Haskell, Rust |
| **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, Jest, JUnit, Bootstrap, Scikit-learn |