

Amrinder Singh

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[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

Education

Claflin University, Orangeburg SC

Bachelor of Science in Computer Science (Honors), GPA: 3.97/ 4.0

Expected Graduation: May 2026

Relevant Coursework: Data Structure & Algorithms | Computer Systems | Codepath – Intro to Android Development

Technical Skills

Libraries: scikit-learn, TensorFlow, PyTorch, Keras, NumPy, Pandas

Frontend: React & Redux Toolkit, JavaScript, HTML, CSS, JSP

Backend and Database: Python, Java, Node.js, Flask, AWS, AWS Bedrock, SQL

Tools and Version Control: Git, GitHub, VS Code, Linux, Jupyter Notebook

Experience

Amazon

Seattle, WA

Software Development Engineer Intern

May 2025 – August 2025

- Built and deployed a backend service powering **AI-generated** image galleries on **Amazon Search**, enabling dynamic product discovery and personalized visual context.
- Designed low-latency APIs with **AWS Lambda, API Gateway, and DynamoDB**, serving **real-time** shoppable view data to over **10,000 internal users**.
- Developed a **CI/CD pipeline** to ingest and process over **100,000+ LLM-generated** product images and metadata into S3 and DynamoDB, **automating** ingestion and ensuring data freshness.
- Designed the **full system architecture**, including **schema design**, caching layers, and **API contracts**, optimizing for **modularity, scalability**, and developer ergonomics, with **comprehensive documentation**.
- Integrated live **A/B testing** with feature flags to measure impact on engagement and conversion; insights influenced roadmap for **scaling AI-powered experiences** across Search.

Claflin University

Orangeburg, SC

Engineering Research Intern

May 2024 – June 2024

- Trained and optimized a **Neural Network** to predict intracranial hemorrhage.
- Utilized deep learning libraries such as **TensorFlow, Keras, and PyTorch** to develop and fine-tune the **CNN architecture**.
- Trained and optimized a **Convolutional Neural Network (CNN)** to predict intracranial hemorrhage using a dataset of over **750,000 CT scans**.
- Boosted** prediction **accuracy** from **70% to 90%** and **reduced** loss by **30%** through hyperparameter tuning.
- Applied batch normalization, dropout, and data augmentation to improve performance and prevent overfitting.

Projects

Resume Analysis Tool (Vista Hackathon) | AWS Bedrock, Flask, Python

July 2024

- Collaborated with team** of 5 ICIMS engineers at the Vista Hackathon to develop a Flask-based backend, integrating **AWS Bedrock's Claude** model for advanced resume analysis and job matching.
- Implemented and **optimized backend workflows** using **LangChain framework**, SQLite, and **AWS Titan**, enabling **efficient data processing** and accurate profile retrieval for AI-driven insights. ([GitHub](#))

AI PDF Q&A Tool | Python, Flask, HuggingFace, FAISS

August 2025

- Built an **AI system** to answer natural language questions from PDFs using **the open-source** Mistral-7B-Instruct model, **sentence-transformer embeddings**, and **FAISS vector** search in a retrieval-augmented generation (**RAG**) pipeline.
- Designed** a modular Flask backend for PDF parsing, semantic chunking, vector indexing, and context-aware answer generation, enabling accurate Q&A across academic and professional documents. ([GitHub](#))

Leadership and Volunteering

Google Developer Student Club, Tech Lead

August 2023 – Present

- Established and lead** GDSC, uniting **50+ tech-enthusiast students** to foster collaboration and knowledge exchange.
- Organized** and conducted weekly instructional sessions for 30+ students, focusing on Python and Flask.

Awards

Presidents List (August 2022 – Present) • **(TMCF) Meta Scholar** (March 2024 – May 2024) • Hack@SCHack 2023 **Hackathon Winner** • Member of National Society of Black Engineers (NSBE) • **(TMCF) DevCon 2024 Scholar**