

Jahnavi Panchavati

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Education

North Carolina State University, Raleigh, NC **May 2025** (Expected)
Master of Computer Science GPA: 3.7/4.0

PES University, Bengaluru, India Aug 2017 – May 2021
Bachelor of Technology in Electronics and Communication Engineering GPA: 8.7/10.0

Relevant Coursework: Design and Analysis of Algorithms, Data Structures, Automated learning and Data Analysis, Cloud Computing Technology, Generative AI for Software Engineering, Neural Networks, Operating Systems, Computer Networks

Skills

- **Languages:** Python, JavaScript, Java, C, HTML, CSS, SQL
- **Technologies / Frameworks:** React, Angular, .NET, Flask, FastAPI, D3.js, Bootstrap, MongoDB
- **Machine Learning:** NumPy, Pandas, TensorFlow, Matplotlib, Scikit Learn
- **Miscellaneous:** AWS, Git, GitHub, Docker, Machine Learning, Computer Vision, Natural Language Processing, LLM, Object-Oriented Programming, Data Mining

Work Experience

Full Stack Software Engineer Jun 2021 – Jul 2023
Accenture Solutions | Bengaluru, India

- Enhanced accessibility to key performance metrics by developing interactive dashboards and predictive data visualizations using **Angular** and **D3.js**, resulting in a **30% increase** in data driven decision-making efficiency.
- Implemented **REST APIs** using **.NET** to streamline data retrieval and backend communication, optimizing data processing time by **35%**. Ensured security measures were integrated during development phase.
- Collaborated with cross-functional teams to create user-friendly dashboards and revamped the application UI based on user requirements; achieved a **30% increase** in user satisfaction and **20% reductions** in page load times.
- Orchestrated end-to-end feature delivery for the web application, ensuring seamless integration between frontend and backend components, which contributed to **15% improvement** in overall system reliability and performance.

Data Science Intern Jan 2021 – Jun 2021
Pivotchain Solutions | Pune, India

- Developed and introduced innovative **deep learning models** for robust color detection, achieving **90% precision** and enhancing image processing accuracy for color-based tasks.
- Led data collection efforts via web scraping techniques, assembling a diverse dataset of 10,000 images for **machine learning model training**.

Projects

Document Summarizer and Q&A Chatbot - Web App – LLM – RAG

- Developed a **RAG-based** web application enabling document uploads, automated summarization, and chatbot-driven Q&A using **ReactJS** for the frontend and **FastAPI** for the backend; integrated **LangChain** and **Hugging Face** models for **AI functionalities**.

Web Application Development– Crop Recommendation Dashboard

- Constructed a web application to recommend crops to the user based on farming-related queries. Integrated the **OpenAI API** into the application to enable a **chatbot** capable of responding to user inquiries regarding crop life cycles.

Cloud Architecture Design

- Designed a cloud architecture for a payment processing system ensuring high availability, scalability and robust security, by evaluating the services from **AWS**, **GCP** and **Azure**. Implemented and tested **horizontal auto-scaling** with Flask application deployed on Minikube cluster, using Locust for load generation.

Natural Language Processing – Computer Vision – Caption Generation for Images

- Developed an image caption generation system using **VGG16** and **LSTM**, achieving BLEU score of **0.48** with the baseline model. Enhanced caption accuracy by attention mechanisms with TensorFlow and improving the BLEU score to **0.7**.