



# PRAGYA DAS

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## Profile

Tech-savvy and analytical student with a strong academic background in computer science with a passion for solving complex problems, programming, and software development. My strengths include excelling in collaborative environments, adapting rapidly, and consistently delivering results, even when faced with challenging project timelines.

## Education

<b>PES University - Bangalore, India</b> <i>Bachelor of Technology: Computer Science</i>	<b>December 2021 - Present</b> <i>CGPA: 9.13/10</i>
<b>AECS Magnolia Maaruti Public School - Bangalore, India</b> <i>High School</i>	<b>February 2019 - April 2021</b> <i>XII (CBSE): 95.6</i>

## Technical Skills

**Languages:** Python, JavaScript, TypeScript, Java, C  
**Software:** PySpark, Wireshark, Hadoop, Kafka  
**Tools:** Contiki OS, Kali Linux

## Experience

<b>Goldman Sachs</b> <i>Summer Analyst</i> <ul style="list-style-type: none"><li>Created a data-dictionary website for the team.</li><li>Choose and design the schema of the database.</li><li>Implement visualize, bulk upload, and search features .</li><li>Built the application using React, Flask, and db2 for the database.</li><li>Learnt agile strategies for development with frequently changing requirements and fast prototyping.</li></ul>	<b>June 2024 - July 2024</b> <i>India</i>
<b>EA Plus LLC</b> <i>Summer Intern</i> <ul style="list-style-type: none"><li>Explored various identity platforms to facilitate the migration to a multi-tenant architecture.</li><li>Evaluated potential identity solutions and contributed my learnings in the decision-making process for the project.</li><li>Designed and implemented a proof of concept (POC) using Google Identity Platform, demonstrating the feasibility of the multi-tenant migration.</li></ul>	<b>June 2023 - July 2023</b> <i>United States</i>
<b>PESUIO</b> <i>Subject Matter Expert</i> <ul style="list-style-type: none"><li>Coached juniors on the basics of Capture the Flag.</li><li>Explained the basics of Cryptography, Forensics, and Information Security to students.</li><li>Conducted a CTF for final evaluation</li></ul>	<b>March 2024 - May 2024</b> <i>India</i>

## Projects

<b>Synergistic EcoSystem for Education and Recruitment</b>   <i>ReactJS, Apache Kafka, LangChain, LLM's</i>	<b>Ongoing</b>
<ul style="list-style-type: none"><li><b>Developing a Collaborative Platform for Education and Recruitment:</b> Implementing a web application to bridge the gap between students, universities, and recruiters, facilitating communication and collaboration among these stakeholders.</li><li><b>Implement Tailored Learning and Course Recommendations::</b> Leveraging LangChain and Kafka to analyze student profiles and recommend relevant courses, ensuring skill alignment with industry demands and individual academic goals.</li><li><b>Industry-University Course allignment:</b> Analyzed top university course syllabi from Coursera, enabling dynamic syllabus updates for universities based on real-time industry insights.</li><li><b>Job Description Filter::</b> Developed a core LLM-powered model to analyze job descriptions and rank candidates from a vector database based on semantic similarity and skill relevance.</li><li><b>Integration with LangChain Framework:</b> LangChain focuses on Managing the flow of information between the LLM, VectorDB, and potentially other data sources.</li></ul>	

- ***Distributed Storage System Architect***: Implemented data nodes for efficient storage and retrieval, complemented by a resilient name node with 100% uptime.
- ***Fault-Tolerant Data Handling***: Engineered fault-tolerance mechanisms, including a replication strategy and continuous health checks for DataNode reliability.
- ***User-Centric Interface Developer***: Designed an intuitive client interface, empowering users to perform operations like directory creation, file management, and seamless uploads/downloads.

- ***Hackathon Collaboration***: Emotify was a collaborative effort undertaken as part of a hackathon under the track Data Science and Intelligent Communication.
- ***Facial Recognition Technology***: We used Convolutional Neural Networks, to analyze users' facial expressions and determine their emotional states.
- ***Machine Learning Recommender Model***: We implemented a machine learning recommender model leveraging K-means clustering that used the analyzed emotional data to suggest a music playlist tailored to the user's current mood using Spotify.

- ***Strangler Pattern***: Each discrete functionality of the application was converted into a standalone microservice.
- ***Fault-Tolerant Data Handling***: Created an e-commerce CRUD application that used RESTful APIs for communication.
- ***Deploy and Orchestrate***: Built Docker images for each microservice using the corresponding Dockerfiles. Used Kubernetes to deploy the application and configure the yaml files to bring the application together.

- ***Design Pattern***: Implemented multiple design patterns.
- ***OOPS***: Used Object Oriented Programming concepts to build the application.

## Research Work

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- ***Objective***: Conducted research to determine optimal Internet of Things (IoT) protocols for earthquake emergency response in smart cities.
- ***Cross Layer comparison***: Evaluated and compared protocols across Network, MAC, and RDC layers in the Contiki OS, using the Cooja simulator for realistic IoT network simulations.

## Certifications

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**Scholarships**: Awarded a 40% tuition fee waiver in semesters 1 and 2 for placing in the top 15% of the batch. Additionally, granted a 50% Scholarship in semesters 3, 4 and 5 for ranking in the top 5% of the batch.

**Top 10 in CTF**: Achieved a top-10 ranking in the CTF event organized by ISFCR at PES University.

**Organized CTF for Ideathon**: Successfully organized a CTF competition for an Ideathon at college.