ABINAYA R

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SUMMARY

Google Gemini Student Ambassador with expertise in Python, Machine Learning, NLP, Deep Learning, and Generative AI. Skilled in designing and delivering full-stack applications and AI-powered solutions, with hands-on experience in deploying scalable systems on cloud platforms. Passionate about leveraging emerging technologies to solve real-world challenges and create impactful Generative AI products. Actively engaged in mentoring peers and fostering AI adoption through workshops, hackathons, and community initiatives.

EDUCATION

Bachelor of Technology in Information Technology (B.Tech IT)   **May 2023 - Present**

Bannari Amman Institute of Technology
- Graduating with Honors
- Relevant Coursework: Data Structures & Algorithms, Software Engineering, Cloud Computing, Operating Systems, Exploratory Data Analysis, Web Technologies

TECHNICAL SKILLS

- **Programming & CS Fundamentals** : Python, Data Structures & Algorithms, Object-Oriented Programming
- **AI & Machine Learning :** Generative AI, Natural Language Processing (NLP),Deep Learning(DL)
- **Cloud & Infrastructure** : Amazon Web Services (AWS)
- **DevOps & Tools** : Docker, Kubernetes, Jenkins
- **Databases & Monitoring** : MySQL

PROJECTS

AI-Powered Online Bookstore
React.js, Flask,pandas, NLTK, Generative AI, TF-IDF, Cosine Similarity
- Developed a full-stack web application serving several books with efficient data processing and semantic search.
- Integrated Generative AI–powered recommendations and intelligent book discovery, supported by REST APIs for categories, search, and book details.

LANturn – Remote System Power Management
React, Node.js, Express, MySQL, Wake-on-LAN
- Collaborated with a team to design and develop a web application enabling remote power management of Windows systems individually or in clusters.
- Applied software engineering principles to implement backend task scheduling and optimize API requests, reducing power management time for labs/offices by 80%.

Private Cloud Deployment with OpenStack Oil Spill Detection & Response System
Python, AIS API, Copernicus, Deep Learning (U-Net, Swin Transformer), A* Pathfinding
- Built an automated system combining real-time AIS data and Sentinel-1 imagery for oil spill detection.
- Applied anomaly detection and deep learning segmentation models, integrated Copernicus API for live data, and implemented A* for emergency response routing.

CERTIFICATIONS AND ACHIEVEMENTS

- **Certifications:**
  - GitHub Foundations - GitHub, Jan 2025
  - Microsoft Azure Fundamentals - Microsoft, Feb 13

- **Leadership & Activities :**
  - Google Gemini Student Ambassador – Mentored peers, and collaborated on community tech events.

- **Languages (L,S,R,W) :** English, Tamil