K PRABHATH REDDY

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EDUCATION

- **PES University** *08/2022 – Present*
  B.Tech in Computer Science and Engineering Bangalore, India
  – **GPA:** 7.04 / 10.00

- **Narayana Junior College** *06/2020 – 06/2022*
  Intermediate Education Vijayawada, India
  – **Score:** 854 / 1000

SKILLS

- **Programming:** Python, Go, C/C++, SQL
- **Backend Development:** REST APIs, Flask, FastAPI (basic), Node.js, Express.js
- **Frontend:** React.js, JavaScript, HTML, CSS, Tailwind CSS
- **Machine Learning:** YOLO, CNNs, Vision Transformers, Model Inference Pipelines
- **System Design:** API Design, Relational Database Design, Performance Optimization
- **Databases & Tools:** MySQL, SQLite, MongoDB, Git, Linux, Docker (basic)

PROJECTS

- **Military Aircraft Detection & Classification System** *Python, YOLOv12, ResNet50, Vision Transformer (ViT), Flask, React* Developed an end-to-end deep learning web application for detecting and classifying military aircraft from satellite and aerial imagery. Designed a two-stage machine learning pipeline using YOLOv12 for object detection and ResNet50 / Vision Transformer (ViT) models for fine-grained classification across 20+ aircraft categories, including fighter, bomber, and transport aircraft. Built a responsive React frontend with real-time image annotation and fleet composition analytics, backed by a Flask-based REST API with GPU acceleration support for efficient inference. github.com/PrabhathReddy7324/capstone.git

- **QueueCTL – Background Job Queue System** *Python, Multiprocessing, SQLite, Click* Designed and implemented a production-grade CLI-based background job queue system inspired by real-world backend architectures. Supported asynchronous job execution, multiprocessing workers, automatic retries, persistent storage, and Dead Letter Queues (DLQ), emphasizing reliability, fault tolerance, and clean system design. github.com/PrabhathReddy7324/queuectl.git

- **Laptop Finder & Comparison Platform** *React.js, Node.js, Express.js, MySQL* Designed and developed a scalable full-stack application that simplifies the laptop buying process using a dual-interface architecture. Built a public-facing user platform for browsing, filtering, and comparing devices, along with a secure admin portal for managing product data, pricing, and reviews. Implemented RESTful APIs and a complex MySQL relational schema with 8+ related tables, optimized to efficiently query thousands of products using granular filters such as GPU type, screen refresh rate, thermal performance, and real-time pricing across multiple retailers. github.com/PrabhathReddy7324/laptopfinder.git

ACHIEVEMENTS

- **CRAIYON – 3rd Place:** Technical hackathon conducted by AURA Club, PES University (02/2024)

GITHUB

- **Portfolio:** github.com/PrabhathReddy7324