Sunainha Vijay

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Experience

- **Summer Intern** *Mphasis (On-Site)* *June 2024 – July 2024*
  - Developed and tested drivers and controllers for servers on Linux using **Python in robot frameworks and C in creating libraries.**
  - Automated driver testing, **reducing** manual testing time by **30%.**
  - **Collaborated with cross-functional teams to improve driver reliability using JIRA.**
- **Summer Intern** *GSoC (Google Summer of Code) – CCExtractor* *May 2024 – August 2024*
  - Developed a **scalable URL shortener platform** using Vue.js, Cloudflare Workers, and Supabase.
  - Implemented authentication systems, email confirmations, and a dashboard for users to track URLs.
- **Research Intern** *RV University* *June 2023 – July 2024*
  - Researched and implemented **Active Learning techniques** to improve model training efficiency.
  - Developed **4 sampling methods** using confidence and clustering models.
  - **Co-authoring a research paper for submission to international journals.**
- **Project Intern** *BroadrangeAI* *Oct 2023 – Dec 2023*
  - Created a generative AI system for transforming website content using NLP and Neural Networks.
  - Integrated OpenAI API for **real-time** content generation. **Improved user engagement by 15%.**

Projects

- **AI Youtuber - Automated Video Creation System** GitHub
  - Developed an AI-based tool that generates short YouTube videos by processing user prompts for content, voice, background, and text overlays, optimizing video creation and publishing workflows. Can generate **30s-60s video in 2 mins**.
  - Tools & technologies used: Python · Natural Language Processing (NLP) · Multimedia Processing · API Integration
- **Image-to-Sketch Conversion System** GitHub
  - Created an ML/DL-powered application that converts images into sketches using techniques like **K-Means clustering, Autoencoders, and Generative Adversarial Networks (GANs)**, enhancing creative digital transformations. Achieved $MSE = 16.28$, $PSNR = 36.01$, and $SSIM = 0.9566$.
  - **Tools & technologies used:** Python · TensorFlow · PyTorch · Scikit-learn · NumPy · OpenCV
- **ParkWise: Smart Parking Management System** GitHub
  - Designed and implemented a Java-based system for managing parking operations, including vehicle entry, exit, and payment processing, featuring both **command-line and GUI interfaces** integrated with MySQL databases for **real-time data access.**
  - **Tools & technologies used:** Java · OOPS · Multithreading · Java Swing · JDBC · MySQL

Education

- **RV University** · B.Tech (Hons.), Computer Science and Engineering *2022 - 2026 · CGPA: 9.45*
- **Narayana CO College** · CBSE (Class XII) *2020 - 2022 · Score: 82.2%*
- **Narayana Olympiad School** · CBSE (Class X) *2019 - 2020 · Score: 90.2%*

Technical Skills

Programming Languages: Python · C · Java · JavaScript · HTML · CSS · Node.js · React.js · Vue.js

Frameworks & Libraries: PyTorch · TensorFlow · Scikit-Learn · Pandas · Hugging Face · OpenAI APIs · Tesseract

Machine Learning & AI: NLP · CNNs · GANs · Autoencoders · Image Processing · OCR

Courses & Concepts: Data Structures · Algorithms · System Design & Architecture · Networking · OS · DBMS

Development Tools: GitHub · DevOps · Langchain · MySQL · MongoDB · OAuth · Cloudflare · AWS Tools

Positions of Responsibility

- **Founder and President·** · Callisto Astronomy Club *2022 - 2023*
  - Formed a club with **15 members** and successfully hosted **5 events**, each attended by an average of **100 people**.
- **Core Member** · Google Developer Groups on campus of RVU *2023 - 2025*
  - Organized **6 successful events** on Google technologies, responsible for **student outreach** as a **Networking Lead**.

Achievements

- **GSoC'24 @CCExtractor** · Contributor, selected in **1220** out of 43,984 *2024*
- **HackerRank - 6 stars gold** · category in data structures and algorithms. *2024*
- **Hackathon - Amazon ML Challenge** · secured a rank of **861** out of 75000 *2024*