Adarsh Saripalli

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SUMMARY

Software Developer with experience in generative AI and human-robot interactions. Demonstrated success in creating scalable AI environments and compliance frameworks, focusing on real-world applications and user experiences through innovation.

WORK EXPERIENCE

Expense+ : Founder & Lead iOS Developer |Swift, iOS Native APIs, MVVM Design Pattern   **December 2024 - January 2025**
- Built an expense-splitting app from scratch, increasing user engagement by **35%** and monthly active users by **20%**.
- Designed intuitive, user-friendly interfaces featuring animations, real-time updates and PDF-sharing capabilities, giving a competitive edge over apps like Splitwise, boosting customer satisfaction by **25%**, and driving feature adoption.
- Key Features: debt simplification, SplitCards, and role-based access control for scalable group expense management.

Building World Models for LLM Planning |Python, PDDL, RAP-tuning, MCTS Algorithm   **September 2024 - December 2024**
- Engineered a dynamic world model using **Llamma3.1-8b-Instruct** and **Monte Carlo Tree Search**, improving predictive accuracy by **35%** on **Blocksworld** domain and extending AI state and action planning for a generalized framework.
- Crafted heuristic-based rewards and self-ask prompts within the LLM, boosting prediction confidence up to **50%**.

Copyright Compliance Framework for Generative AI | PyTorch, HuggingFace Transformers   **January 2024 - April 2024**
- Developed a Generative LLM framework to ensure compliance with copyright regulations in AI-generated content.
- Utilized **Llama2** knowledge space to tune the LLM model, integrating citations for each output to track data sources.
- Implemented Word-Vector matching and **ALCE** attributes using "**hugging face-cli**"to analyze and filter model outputs, minimizing regurgitation of training data, enhancing legal compliance and reducing infringement incidents by **47%**.

Enhancing Object Detection with Contextual Enhancement | TensorFlow, OpenPifPaf, ResNet-50   **January 2024 - April 2024**
- Enhanced object detection in video streams, achieving a **63%** accuracy improvement using PyTorch and ResNet-50, optimized for gesture recognition. Reduced computational overhead by **24%** and increased detection speed by **15%** by integrating Faster R-CNN with Deepoint, leveraging **XLA** and **TVM** for cross-platform model optimization.
- Implemented **OpenGL** for real-time directional arrow rendering, improving user interaction with gesture controls.

Center for Human, AI and Robot Teaming, ASU: Research Assistant   **November 2023 - April 2024**
- Collaborated with **APTIMA** and **DARPA** to deploy AI simulations on Minecraft test beds, validating **85%** of human robot teaming hypotheses through cyclic game planning, game design, data collection, and research analysis phases.
- Simulated task scenarios for gameplay testing, boosting teaming accuracy by **74.87%** and model feedback reliability.
- Achieved **95%** data quality and **90%** modeling accuracy through comprehensive data analysis supported by research teams: DARPA ASIST, Gallup, CMURI and IHMC teams, refining hypotheses with contributions from **25+** researchers.

Multisoftnet Dot Com Pvt. Ltd, IND: Software Development Engineer Intern   **June 2022 - October 2022**
- Lead the development of a full-stack online retail delivery scheduling system using **React.js** and **Redux**, enhancing the bookings, which resulted in a **30%** reduction in order purchase time and a **25%** increase in customer satisfaction.
- Developed a robust backend application using **Node.js**, **Express**, and **MongoDB**, improving system efficiency and operational continuity by **35%**, and streamlined transactions by integrating APIs for real-time payment processing.

LEADERSHIP EXPERIENCE

Club Lead, Google Developers Student Club, Andhra University, IND   **August 2021 - May 2022**
- Organized tech workshops/hackathons for Google Technologies: Flutter, TensorFlow, Google Cloud, and Firebase.
- Fostered partnerships with industry experts and orchestrated enlightening talks on emerging topics such as Blockchain, UI/UX, Cloud Computing, Artificial Data Cloning, Prompt Engineering and Accelerated Machine Learning.

TECHNICAL SKILLS

Programming Languages: Python, Swift, C#, R, C, C++, Java, SQL (MySQL), JavaScript, PDDL.
Frameworks & Libraries: PyTorch, TensorFlow, Transformers, Sentencepiece, Peft, Scipy, TQDM, Gym, Tarski, Bs4, PyYAML, Ninja
AI & Data Processing: Prompt Engineering, OpenPifPaf, OpenCV DNN Module, Faster R-CNN, XLA, TVM, MLIR, LLVM
Developer Tools: Unity, Flutter, MATLAB, Git, Jenkins CI, Postman, REST APIs, ROS2, IBM SPSS, Qualtrics XM.

EDUCATION

Master of Science in Computer Science	**May 2025**
Arizona State University, Tempe, AZ, US.	**3.89**/4.0 GPA
Bachelors of Technology in Computer Science	**May 2023**
Andhra University, Visakhapatnam, AP, India.	**8.62**/10.00 GPA