Jay Parmar

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EDUCATION

University of Central Florida **Orlando, FL**
Doctor of Philosophy in Computer Science - GPA: 3.67 August 24 - Present
Bachelor of Science in Computer Science - GPA: 3.508 August 19 - December 23
Honors: President's Roll (Spring 2021); Dean's List (Fall 2021, Spring 2022)

ACADEMIC EXPERIENCE

Graduate Research Assistant, CRCV, UCF — *Advisor: Dr. Mubarak Shah* August 24 - Present

- Co-authored a CoVR dataset benchmark using FineGym/FineDiving to address fine-grained video retrieval gaps.
- Designed a CoVR method achieving +5 mAP@K over prior models and GME models.
- Collected and labeled 12k YouTube streetscape videos for traffic and pedestrian safety.
- Developing a VLM-integrated anonymization function to reduce bias and privacy leakage.

Undergraduate Research Assistant, FSEC UCF - *Advisor: Dr. Hubert Seigneur* March 23 - August 24

- Automated daily SQL data transfer (12+ schemas, 50+ tables) to OneDrive for streamlined lab access.
- Contributed to ML model comparison study on defect detection in solar EL images.
- Built algorithm to classify functional vs. faulty IV curves for solar fault analysis.
- Implemented and validated 3 IV curve normalization methods using IEC standards to support reproducibility.

LEADERSHIP EXPERIENCE

Supplemental Instruction Leader, Intro. to C / CS I — *Dr. Andrew Steinberg* August 21 - May 23

- Mentored students in coding, debugging, and algorithm design, translating academic theory into practice.
- Created 50+ custom problem sets to support academic success in computer science fundamentals.
- Honored as SI Leader of the Month for teaching excellence.

PROJECT EXPERIENCE

Athlete Monitoring System (AMS), ML Team — *Senior Design Capstone Project* January 23 - December 23

- Predicted athlete readiness using Python-based ML models, achieving an RMSE of 5, surpassing the <10 goal.
- Analyzed an in-depth review of 100+ athlete-monitoring research papers to extract performance indicators.
- Developed custom metrics (acute-chronic ratios) to assess injury risk and personalize training protocols.

Course Scheduler for Computer Science — *Junior Design Capstone project* January 22 - May 22

- Architected a 4-year CS course scheduler to manage over 155 courses, with prerequisites, and electives.
- Deployed ReactJS (web) frontend and debugged React Native (mobile) for smooth cross-platform UX.
- Unified a streamlined course navigation flowchart interface and error alert system.

CERTIFICATIONS

AI/ML: Deep Learning Specialization (Coursera); Microsoft AI Certifications (edX); Reinforcement Learning (Udemy); Deep Reinforcement Learning (Udemy) **Web:** Web Development Bootcamp (Udemy)

SKILLS

Hard Skills: *Python; PyTorch; TensorFlow; Keras;* React; Node.js; TypeScript; Bootstrap; MongoDB; MySQL; PostgreSQL; C; C++; Java; C#; Lisp; Haskell; Linux; Jira; Azure; Figma; Git; Scrum; VS.

Soft Skills: Active listener; Adaptive thinker; Collaborative leader; Continual learner; Clear communicator; Critical Thinker; Effective organizer; Self-Motivated; Strong Work Ethic; Team Player.

Languages: English (Fluent); Hindi (Fluent); Gujarati (Fluent); Marathi (Beginner).