Joshua Glaspey

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Summary

Master's student at University of Central Florida with an interest in software development and machine learning. Currently pursuing Machine Learning, graduated with a bachelor's degree in computer engineering and a minor in Mathematics (May 2024). Personally interested in using AI to boost industry standards, and allow data analysis to be accessible for all businesses.

Education

University of Central Florida Orlando, FL

- M.S. in Intelligent Systems and Machine Learning, University GPA: 4.0/4.0 Expected Graduation: May 2025

Relevant Courses / Skills: LLM Alignment, Computer Vision, Convolutional Neural Networks, Deep Learning, Time-Series Data Analysis, Genetic Algorithms, Machine Learning, Pattern Recognition, PyTorch, Pandas

University of Central Florida Orlando, FL

- B.E. in Computer Engineering, Minor in Mathematics, University GPA: 3.9/4.0 Graduation: May 2024
- Awards: President's Honor Roll (Fall 2020, Spring 2022), Dean's List (Spring 2021, Fall 2021, Fall 2022, Spring 2023)

Relevant Courses / Skills: Artificial Intelligence, Object-Oriented Programming / Software, Full-stack Web Development, Operating Systems, Computer Architecture, Embedded Systems, Matrix & Linear Algebra, Mathematics for Machine Learning

Experience

Microsoft, Software Engineer Intern May 2024 – Aug 2024

- Contributed to planning, coding, and validating a new Power BI feature, ensuring high performance and reliability
- Collaborated on requirements, used best practices, and participated in meetings to enhance software functionality and communication

University of Central Florida, Undergraduate Teaching Assistant Aug 2022 – Dec 2022

- Led large student groups to both reinforce ideas from the main lecture and introduce new topics
- Graded student assignments, proctored exams and quizzes, and participated in weekly meetings

Pratt & Whitney, Development Operations Engineering Intern May 2022 – Aug 2022

- Researched and analyzed new technology to determine if it contributed to increased efficiency in the data recording system
- Wrote documentation for future reference, and presented information to high-leadership roles within the company

Martin County School District, On-Site Support Technician Aug 2018 – May 2020

- Maintained hardware devices, such as laptops, projectors, and printers, along with other smaller equipment
- Referenced documentation and contacted customer support to acquire information about a product

Skills

Programming Languages: JavaScript, TypeScript, Python, Java, C, C++, C#
Tools / Frameworks: Next.js, React, Node.js, Git / GitHub, Angular, Unity, Unreal Engine 5, Windows, PyTorch, TensorFlow
Soft Skills: Agile Programming, Communication, Leadership, Logic & Organization, Data Analysis, Statistics, Problem Solving, DevOps

Projects

Check out ALL my projects on my portfolio website

Aligning Audio Encoder and LLM via Preference Fine Tuning, Researcher Sep 2024 – Dec 2024

- Assisted development for a scalable speech-to-text alignment framework by adapting preference fine-tuning methods, enhancing the alignment between audio encoders and language models for improved multimodal performance
- Conducted research on alignment techniques, implemented novel methods for generating dispreferred speech data, and contributed to the development and fine-tuning of multimodal models for speech recognition, translation, and question answering tasks

AutoCaddie, Software Developer Aug 2023 – Apr 2024

- Engineered an AI-driven smart coaching system for golf swings, integrating sensor data and computer vision for real-time feedback
- Developed and trained models using MediaPipe and CNNs, achieving 90% detection accuracy, and designed a user-friendly GUI with tkinter for seamless interaction

Tennis Ball Detection in Live Professional Tennis Matches, Researcher / Developer Nov 2023 – Dec 2023

- Trained object detection models (Mask R-CNN, YOLOv8) to accurately detect high-speed tennis balls within professional match frames
- Collected and processed 2000+ images, contributing to advancements in high-velocity object tracking within sports analytics

Extracurriculars

Tennis Club at UCF, *Former Risk Manager*

- Ensured that the club provided a safe environment for other members
- Built leadership and served as captain for the 12th ranked team in the nation

UCF Curriculum Oversight and Review Committee, *Student Representative of the Computer Engineering Program*

- Provided student perspective in the organization of the Computer Engineering program within UCF
- Engaged in a semi-annual assessment by assessing student performance in different subjects

Knight Hacks, *Participant*