Joshua Glaspey

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Summary

Recent Master's graduate in Computer Engineering from the University of Central Florida, specializing in Machine Learning. Previously earned a Bachelor's degree in Computer Engineering. Passionate about using artificial intelligence to automate data-driven workflows and design tools to simplify software development and broaden accessibility across the workforce.

Education

University of Central Florida Orlando, FL

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

Relevant Courses: Machine Learning, Neural Networks and Deep Learning, Computer Vision, Pattern Recognition, Advanced Artificial Intelligence, Evolutionary Computation, Computer Understanding of Natural Language, Current Topics in Machine Learning

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 & 2023 + Spring 2022), Dean's List (Spring 2021, 2023 & 2024 + Fall 2021 & 2022)

Relevant Courses: Object-Oriented Programming, Operating Systems, Embedded Systems, Computer Architecture, Computer Networks, Software Engineering, Matrix & Linear Algebra, Statistics, Differential Equations, Machine Learning, 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 (Discrete Structures) 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: Python, JavaScript/TypeScript, Java, C, C++, C#, R, SQL
Machine Learning & AI: PyTorch, scikit-learn, Pandas, OpenCV, MediaPipe, YOLOv8, HuggingFace Transformers, LLMs/PLMs
Tools & Frameworks: Next.js, React, Angular, Tailwind CSS, Material UI, Unity, Unreal Engine 5, Git/GitHub, Visual Studio Code, Agile/Scrum
Soft Skills: Leadership, Collaboration, Problem Solving, Analytical Thinking, Time Management, Organization, DevOps

Projects

Check out ALL my projects on my portfolio website

Adapting Chain of Contradiction for Sarcasm Detection [Link to Project Page], *Researcher / Developer* Jan 2025 – May 2025

- Developed a sarcasm detection framework using LLMs by designing structured prompts that analyze sentiment contradictions in text
- Applied prompt engineering techniques across GPT-4o mini, LLaMA 3-8B, and Qwen 2-7B, demonstrating improved performance on sarcasm classification benchmarks using few-shot learning

Aligning Audio Encoder and LLM via Preference Fine Tuning [Link to Project Page], *Researcher* Sep 2024 – Dec 2024

- Assisted development within a small team 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: AI-Powered Golf Swing Coaching System [Link to Project Page], *Developer* Aug 2023 – Apr 2024

- Designed an AI-driven system to analyze golf swings using computer vision/sensor data, delivering feedback using a desktop interface
- Developed and trained pose detection and classification models using MediaPipe and CNNs, integrated them with a Tkinter GUI, and achieved 90%+ swing detection accuracy in live testing

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

KnightHacks, *UCF Hackathon, Participant*