Harrison Stark

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EDUCATION

Bachelor of Science in Computer Science - 3.76 GPA   **December 2023**
University of Florida, Gainesville, FL
- **Achievements:** Minor in Mathematics, Bright Futures Scholarship, Dean's List, Phi Theta Kappa Member
- **Relevant Coursework:** *Data Structures and Algorithms, Operating Systems, Computer Network Fundamentals, Information and Database Systems, Natural Language Processing, Intro to Machine Learning*

EXPERIENCE

Qualtrics - *Software Engineer*   **October 2023 - Current**
- Took the Quack-end Developer project to production, completing a launch readiness checklist for general access to be used internally by all employees.
- Updated high volume automations from Python 2 to Python 3 to proactively improve security posture, and created and improved upon unit and integration tests alongside documentation for ease of future development.

Qualtrics - *Software Engineer Intern*   **June 2023 - August 2023**
- Designed and developed the Gradebook Passback feature for the Qualtrics LTI 1.3 integration using **Node.js** allowing users to effortlessly sync grade data from Qualtrics surveys.
- Tested, reviewed, and executed the complete launch readiness checklist for the early access phase, surpassing the original scope.
- Proposed and implemented a further permissions feature with an estimated 50% increase in potential customers.

Undergraduate Research - *Independent Researcher*   **January 2023 - May 2023**
- Authored a research paper exploring the use of **YOLOv8**, a state-of-the-art object detection algorithm, to improve real-time traffic signal operations at a complex intersection in Gainesville, Florida.
- Suggested an implementation plan involving cameras connected to a central processing unit to monitor traffic and pedestrian activity proposing signal timing adjustments to improve safety and efficiency up to 10%.

Microsoft Tech Resilience - *Mentee*   **February 2022 - March 2022**
- Learned to be confident, belong within different workplace cultures, and promote inclusivity.
- Produced technical solutions with a small group for theoretical problems within the industry.

PROJECTS

Algorhythmics   **Fall 2023 - Current**
- Led a team of four in developing an AI DJ using **JavaScript** and **Python**, adhering to enterprise software engineering standards.
- Assumed the responsibilities of Scrum Master, overseeing the end-to-end management of the project, including the design and implementation of the Kanban board, sprint planning, and team scheduling.

Quack-end Developer   **Summer 2023**
- Led a team of three in a two-day AI Hackathon to develop an LLM-based rubber duck debugger which was very well-received and is currently being transitioned for internal use within Qualtrics.
- Assisted in creating the frontend utilizing **React.js** and led development of the backend powered by **FastAPI**.
- Implemented text-to-speech and speech-to-text using Amazon Polly and Amazon Transcribe, respectively, and used AWS S3 Buckets for rapid input and output.

Only Cats   **Fall 2022**
- Developed a video processing program with a partner to remove video frames not containing cats in **Python**.
- Utilized a CNN for cat detection in videos, implementing an enhanced **EfficientNetB0** architecture.
- Accelerated unit testing by up to 99% using single images in place of videos.

Traffic Accident Heatmap   **Spring 2022**
- Worked in a group of three to create a **C++** program to display traffic accidents using the Google Maps API.
- Adapted dataset of nearly three million traffic accidents from Kaggle which included location and severity.
- Improved time efficiency of click response and sort by over 90% by utilizing attributes of heaps.

SKILLS

Programming Languages: *JavaScript, C++, Python, SQL (MTA Industry Certification), Java, HTML, CSS, Embedded JavaScript, ARM Assembly, MATLAB*
Frameworks: *Node.js, React.js, FastAPI, Flask, TensorFlow, Keras, JDBC, SFML*