Tameem Tantawy

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EDUCATION

University of South Florida — Tampa, FL
Bachelors in Computer Science — *Expected Graduation: May 2027*

GPA: 3.86/4.0
Relevant Courses: Programming Concepts (Python), Program Design (C), Computer Organization, Object-Oriented Programming (OOP), Data Structures, Algorithms (Princeton University)
Achievements: USF Green and Gold Presidential Awards, USF Dean's List (Fall 2023)

EXPERIENCE

Undergraduate Research Assistant — September 2024 – Present
SHEILD Lab at USF — *Tampa, FL*
- Collaborating on a research project inspired by the Mac Parkman Foundation to raise awareness about concussion prevention.
- Designing and developing a cross-platform mobile/web application using **Flutter** for the frontend to provide an interactive and user-friendly experience.
- Display live feedback gathered from a test dummy, visualizing concussion impacts to educate users on injury prevention.
- Building a scalable backend with **Django**, enabling real-time data processing and feedback.

Co-Founder & Lead Developer — May 2024 – Present
Jamaa — *Tampa, FL*
- Led a team to co-develop a **cross-platform** mobile app, connecting users with their local Muslim community.
- Implemented the frontend using **React Native** and **NativeWind**, reducing page load time from **200ms** to **65ms**.
- Architected a scalable backend system with **Django's REST Framework**, utilizing **PostgreSQL** for consistent and reliable data storage, reducing query response and server load times by **50%**.
- Successfully pitched the app to **30+** mosques in the Tampa Bay area, securing interest and commitment for testing.

Software Engineering Volunteer — April 2024 – May 2024
Shawarma Bono — *Remote*
- Developed a dynamic **Full-Stack** website for a local shawarma restaurant using the **MERN** stack, enhancing digital customer engagement.
- Engineered a **React.js** frontend with **Context API** for authentication, integrated with a **Node.js/Express.js** backend to create **RESTful API's** tested by postman and **MongoDB** database.
- Implemented **JWT** for secure authentication processes, ensuring robust security for user data and transactions.
- Collaborated closely with restaurant owner to identify requirements, leading to a tailored website that improved total orders received by **30%**, resulting in an increase in revenue of **$24,000** .

PROJECTS

Pork-Free Dining Finder | *React, FastAPI, PostgreSQL, Selenium, BeautifulSoup*
- Developed a web scraper using **Selenium** and **BeautifulSoup** to scrape and filter food data from the USF dining halls.
- Implemented a backend with **FastAPI** to process and serve the scraped data, and integrated **PostgreSQL** for data storage.
- Designed a **React.js** frontend to display categorized food data, indicating whether foods contain pork or not, with **99.5%** accuracy.
- Set up a scheduling mechanism to run the scraper at set times and update the database, ensuring up-to-date information.
- Packaged and deployed the backend serverlessly using **Docker** and **AWS Lambda** for efficient and scalable deployment.

Cliff Diver AI | *Python, PyGame, NEAT-python algorithm*
- **Developed** an interactive diving game from scratch using **Pygame** utilizing the **NeuroEvolution of Augmenting Topologies (NEAT)** algorithm to dynamically train an agent creating **Neural Networks** to master the game mechanics.
- Implemented complex game physics to simulate realistic diving dynamics, enhancing the AI's learning experience and game authenticity, resulting in the agent achieving **97%** accuracy in dives.
- Analyzed when the AI reached its maximum **fitness** which was after an average of **80** generations.

TECHNICAL SKILLS

Programming Languages: C, C++, Python, JavaScript, HTML, CSS
Frameworks/Libraries: React.js, React Native, Node.js, Express.js, Django, FastAPI, NEAT-python, Pygame, Selenium, BeautifulSoup
Database Technologies: PostgreSQL, MongoDB
Developer Tools: Git, Postman, Docker, Amazon Web Services Lambda, EC2, S3