Tyler "TJ" Shapiro

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SUMMARY

Computer Engineering major with 5+ years of internship experience designing full-scale applications from prototype to deployment specifically in AI/Automation, Robotics, Control Systems, and VR/AR. I am passionate when it comes to the task at hand and will ensure that my learning is complemented with an efficient and reliable result.

EDUCATION

University of Illinois at Urbana-Champaign *May 2024*

B.S. Computer Engineering 3.8/4

TECHNICAL SKILLS

Languages: C/C++, C#, Python, Java, JavaScript, CSS, HTML, SQL

Frameworks: Git/Github, Unity3D, Arduino, Unreal Engine, React, TensorFlow, Rust, Unix, UI/UX, OpenCV

EXPERIENCE

Dynam.AI – San Diego, CA

Software Engineering Internship *May 2021 – August 2021*

- Designed and improved neural networks and algorithms under world-class data scientists and engineers in a fast-paced startup environment
- Utilized proprietary machine-learning software to better simulate true-to-life physics in VR engines (i.e. Unity3D)
- Communicated and collaborated with clients to incorporate the most efficient and user-friendly pipeline for their specific platform
- Developed an intuitive and engaging graphical interface in C++ for project workflow significantly increasing productivity and eliminating the need for multi-platform design tools

PeakLogic Software – San Diego, CA

Software Engineering Internship *May 2019 – July 2020*

- Led a development team to collect and analyze thousands of patients' EEG data using Python and TensorFlow to detect and treat neurological disorders through AI/ML
- Automated data migration/extraction process from Azure cloud-based web server using best practices learned from Data Structures/Computer Science courses
- Co-authored a research publication under a board-certified radiation oncologist that has had a significant impact in the medical device software field

PROJECTS

Guitar Pedal/VST Pi *December 2021 – Present*

- Transformed a Raspberry Pi microcontroller into a custom electric guitar pedal using techniques from electrical engineering courses
- Programmed rock-esque audio effects in C utilizing common digital signal processing methods and electronics
- Learned about various engineering decision processes by using components such as op-amps and analog to digital converters
- Product is heavily used when performing with my band and costs 50% less than similar pedals on the market

VR Physics Playground *October 2020 – Present*

VR Club Project Lead

- Crafted a set of VR sandbox games from start to finish to help college students better visualize ideal physics problems by interacting with objects
- Brought idea to physics professors at the University of Illinois and is now included in their suite of educational technologies
- Integrated UI/UX in Javascript to allow students to observe and manipulate equations from classical mechanics while performing actions (i.e. throwing a ball or net force on a rollercoaster)
- Implemented Oculus/Vive SDK technology for cross-platform support across a wide range of VR devices