JOVAN YOSHIOKA

Java, Python, JavaScript, HTML/CSS, PHP, MySQL
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EDUCATION

University of Tennessee, Knoxville, Tickle College of Engineering — Knoxville, Tennessee
Bachelor of Science in Computer Science, Minor in Mathematics, Concentration in Honors — Graduation: May 2024

- Cumulative GPA: 4.0/4.0 | Dean's List: Fall 2020, Spring 2021
- Courses: Data Structures and Algorithms (**C++**), Multivariable Calculus, Engineering-Based Problem Solving

EXPERIENCE

University of Tennessee, Knoxville — Knoxville, Tennessee
Undergraduate Research Assistant — March 2021 - Present

- Creating and deploying a web app (**HTML/CSS**, **JavaScript**, **PHP**, **MySQL**) that integrates coding into PreK-5 English classes via code challenges based on stories' plots for schools that lack dedicated computer science programs.
- Implementing an API to interpret custom block-based code (**Blockly**) as **JavaScript**.
- Designing user-centered interface in collaboration with PreK-5 teachers spanning 2 school districts.

Oak Ridge National Laboratory — Knoxville, Tennessee
Software Engineer Intern — June 2021 - August 2021

- Built a web app (**React**, **Django**, **SQLite**) that visualizes real-time traffic, parking, and EV charging data to enable sustainable campus transportation, improving travel time, safety, and fuel efficiency ($150,000 funding).
- Developed a vision algorithm (**Python**, **OpenCV**) to count vehicles/measure speed; 97% accuracy over 1,152 vehicles.
- Integrated **FFmpeg** and multiprocessing to simultaneously evaluate several real-time video feeds, collecting data 24/7.
- Implemented data processing capabilities (**Python**) to an EV charging station amperage reading script.
- Discussed software requirements and workflow. Presented an award-winning poster at an intern symposium.

Oak Ridge National Laboratory — Knoxville, Tennessee
Full Stack Developer Intern — June 2019 - July 2019

- Developed a web app (**AngularJS**, **C#**, **Bootstrap**) that visualizes national transportation data to direct infrastructure improvements used by all 50 state departments of transportation and referenced in 3,060 papers ($10 million funding).
- Implemented a custom variables feature to tailor query results toward users' specific needs improving the UX.
- Debugged legacy version query failures reported by users resulting in continued operation and consumer support.

PROJECTS

Drone Fleet, Individual Project — July 2020 - Present

- Programming connected drones (**Python**, **Tello SDK**) to individually perform actions, e.g. stay, follow, elevate, etc.
- Devising a vision algorithm (**OpenCV**) to detect a designated commander and track body joint movements.

AlienX, Team Project — January 2020 - March 2020

- Programmed all subsystems (**Java, WPILib**) of an $8,000 123lb robot (chassis, ball intake/chamber/launcher, climber).
- Accelerated autonomous routines by 60% by employing parallelism and spline path following.
- Rank 2 (62 Competitors) at regional competition. Demonstrated to 20,000+ people at STEM outreach events.

LEADERSHIP

Heath Integrated Business and Engineering Program, University of Tennessee — Knoxville, Tennessee
2024 Cohort Member — April 2021 - Present

- Selected as one of 24 engineering/business students based on leadership capabilities and academic achievement to undergo personal executive mentorship and joint curriculum to bridge the gap between engineering and business.
- Applying systems-thinking and strategic decision-making to collaborative, real-world projects.

FIRST Robotics Competition, Hardin Valley Academy — Knoxville, Tennessee
Programming Mentor — September 2020 - Present

- Teaching 6 high school students to code robot subsystems, autonomous routines, and vision algorithms (**Java**).
- Guiding students through debugging code to provide exposure to problem solving and teamwork.

HONORS & AWARDS

- 1st Place (150 Competitors, Undergraduate & Graduate), ORNL 2021 Intern Symposium, best scientific poster.
- 1st Place (State and National, 55 Competitors), FBLA 2019, designed/coded/presented an e-book issuing web app.
- Featured on 1 of 6 Intern Spotlights (ORNL 2019) and 1 of 3 Student Spotlights (Hardin Valley Academy 2020).