Roshan Raj

https://roshanraj.ml ● [redacted] ● [redacted]@gmail.com ● https://github.com/realRoshanRaj

Skills

Languages/Technologies: Java | Python | C++ | JavaScript | HTML/CSS | Vue.js/Nuxt.js | React.js | Node.js | MongoDB | GitHub

Education

[redacted] **High School** [redacted]
High School Diploma *Sep. 2017 - Present*
Relevant Coursework: Computer Programming (Python), AP Computer Science A (Java)

[redacted] **Community College** [redacted]
Dual Enrollment Student *Jan. 2021 - Present*
Relevant Coursework: Linear Algebra, Differential Equations

[redacted] **College** [redacted]
Dual Enrollment Student *Sep. 2019 - Dec. 2020*
Relevant Coursework: Intro to C++, Advanced C++, Calculus 3 with Analytical Geometry

Projects

Zoom Scheduler: Meeting Organizer | Published on Chrome Web Store **Jul. 2020 - Nov. 2020**

- Designed a web extension with **HTML, CSS, JavaScript, and Vue.js** to save, organize, notify, and open meetings that the user inputs, gaining over 400 active users in 75 different countries.

MiLinks | https://milinks.ml **Dec. 2019 - Jun. 2020**

- Created a linktree replica, implementing user authentication with **MongoDB** to store user profiles through a **Node.js (Express.js)** back-end server, while using **Vuex Store** on front-end to save user credentials between page changes.
- Incorporated **Vuetify's CSS Framework** into **Nuxt.js'** SEO optimized front-end, hosted through Netlify on custom domain while the back-end was hosted through Heroku.

Project Portal **Jan. 2018 - Apr. 2018**

- Developed **Java Swing** Application that uses Selenium Web Driver to launch a browser and automate the account login process for websites, and enhanced with Google Translate API to provide support in multiple languages.

Activities

FIRST Robotics Team: Frog Force 503 [redacted]
Assistant Programming Group Lead *Sep. 2017 - May 2021*

- Implemented pure pursuit autonomous path following algorithm with PIDF control by using encoder and gyroscopic feedback to determine on-field location, increasing autonomous accuracy by over 125%.
- Designed/Created GUI with **JavaFX** to generate, store, and transfer trajectories with quintic/cubic spline-fitting directly to robot with SFTP, improving overall trajectory generation speed by 333%.
- Spearheaded offseason research in computer vision and autonomous drive methodologies.
- Managed GitHub code integration for all robot-specific programming repositories and integrated Git Workflow.

Novi Public Library [redacted]
Python Instructor *Aug. 2019 - Oct. 2019*

- Instructed 10+ elementary/middle school students on the fundamentals of object-oriented programming using Python.

Certifications

Computer Graphics, UC San Diego 2020 | The Arduino Platform and C Programming, UC Irvine 2020 | Microsoft Office Suite

Honors/Awards

Honors/Awards: AP Scholar Award with Distinction (2020) | USACO Silver Division Contestant | Top 3 in NHacks Hackathon