Soumav Maiti

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SKILLS

Languages: Python, C++, C, Typescript, Javascript, HTML, CSS, MATLAB, VHDL
Frameworks: React, Firebase, Gatsby, HTTP, OpenCV , Tensorflow, ESP, Jest, Cypress, GraphQL, React-Testing-Lib
Tools: Arduino, SSH, Linux, Git, GitHub, Gitlab, Altium, SolidWorks, AutoCAD, Jira, Confluence

EXPERIENCE

Web Software Developer – *Ontario Digital Service (Jan 2022-April 2022) – React, GatsbyJS, Jest, Cypress, GraphQL*

- Created a full-stack questionnaire web-app using a GatsbyJS/React frontend, and a JSON/GraphQL backend
- Developed complex, efficient., stateful components using React hooks, refs, and callbacks
- Utilized Gatsby & GraphQL API's to create, query, modify, and delete the app's JSON data schema.
- Established functional unit testing using Jest & React-Testing-Lib and implemented E2E testing with Cypress.
- Practiced agile development methods to research, design, develop, and test new components, libraries, and additions.
- Constructed numerous pages using Drupal CMS, JS, HTML, and CSS.

Full stack Software Developer – *Polar (May 2021-September 2021) – JS, HTML, React, HTTP, REST, JSON*

- Constructed a full-stack chrome extension using an HTML frontend, JS DOM manipulation, with an IndexedDB backend.
- Developed an image, text, & video webscraper using JS which worked effectively on over 95% of tested websites
- Implemented REST API's using HTTP & intercepted/modified incoming and outgoing network traffic requests & headers
- Established user authentication using cookies, while indexing user information using IndexedDB
- Practiced agile development procedures to rapidly prototype, test, assess and verify new implementation ideas
- Used SSH to connect to a remote Linux desktop for production with git for version control.

Computer Vision Developer– *University of Waterloo Aerial Robotics Group (October 2020 – May 2021)*

- Developed camera video stream and responsive frame grabbing systems using OpenCV and Python
- Implemented KCF real time object tracking for detected objects in Python.
- Architected the drone's autonomous geolocation & positioning models.

PROJECTS

Portfolio Website – *Full-stack React Web app (March 2022 - Present) –Javascript, React, Firebase, Styled-Components*

- Designed & Developed a single-page, responsive, full-stack React app using React-Router.
- Implemented a structured, NoSQL database in Firebase to render page information as well as for file storage.
- Utilized react hooks to render pages with promise-based asynchronous structure while page data is queried.
- Established highly organized, reproducible, reusable code structure using styled-components. (check it out on GitHub!)

JobOverflow – *Job Application Chrome Extension (January 2021) – React, Javascript, Bootstrap*

- Developed a web scraper using Javascript to find any keywords on a job application page and autocomplete any corresponding inputs.
- Created an aesthetic extension design using Bootstrap, HTML, and CSS elements.
- Implemented dynamic user interfaces to toggle and alter extension settings using React.
- Inserted an event listener with React to re-execute the program on page update.

"Smart" Thermostat – *Interdisciplinary Thermostat Controller Project (January 2022 – March 2022) –Arduino, C++, ESP, BLE*

- Developed a "smart" thermostat that can be remote controllable through phone using Bluetooth Low Energy.
- Established a BLE advertising server on Arduino utilizing ESP & BLE libraries in C++
- Utilized Arduino Servo libraries to control a motor to spin a set amount, based on user-inputted temperature values

EDUCATION

University of Waterloo - Candidate for BASc, Mechatronics Engineering (09/2020 – 08/2025)

- Relevant courses include: Data Structures & Algorithms (C++), Microprocessors, Computer Structures & Real-Time Systems
- Cumulative GPA: 4.0