Punit Daga

pewnit.com | github.com/pewnit | linkedin.com/in/punitdaga

Skills

Languages	JavaScript, Typescript, HTML/CSS, Java, Kotlin, Python, C++, C, Assembly, VHDL
Frameworks & Libraries	React.js, Node.js, Angular, MUI (Material, Styles, Icons), React Leaflet, React Router
Other tools	Firebase, Azure, Azure DevOps, PostgreSQL, SQL, FirebaseDB, JSON, Google Cloud (OAuth, Vision), Shopify API
General Skills	Linux, Git, Docker, Google Cloud Platform, Azure, Azure Devops, VS Code, Fitbit API, Github Pages, Cloudflare Pages

Education

University of Ottawa *Ottawa, Canada*

BASc in Computer Engineering with a focus on hardware design and architecture. *September 2018 - May 2024*

- **Technical Courses:** Digital Systems I, Computer Architecture I, Digital Systems II (Advanced Sequential Logic and Digital Hardware Design), Computer Architecture II (Embedded Systems Hardware-Software Codesign with ARM Assembly and C), Object-Oriented Programming, Data Structures & Algorithms, Object-Oriented Software Engineering, Software Construction (Concurrency, Protocols, and Formal Languages in Software)

Work Experience

Lonehaven *Toronto, Canada*

Software Developer *January 2022 - December 2022*

- Created React.js marketing website and Shopify stores for clients using mui, Shopify API, React.js, Angular, and AWS Servers to serve 20,000 customers
- Overlooked the creation of company website; managed 5 student developers overlooking projects for 6 months

Ottawa Department of Medicine *Ottawa, Canada*

Software Engineer *August 2020 - April 2021*

- Collaborated with Microsoft Engineers to create a webapp using React.js for questionnaire and PDF renderer for internal usage
- Created UI using mui, used react-pdf to render PDF, running on a Node.js server on Azure
- Other tools used: Azure Devops

Projects

ScrapYard - Automated Trash Sorting System *Ottawa, Canada*

University of Ottawa *September 2022 - April 2023*

- Created a sustainability focused garbage and recycling sorter prototype for use in public spaces.
- Created the web app, Express.js server, PostgreSQL server, OAuth, React Leaflet, and managed Google API/Firebase
- Contributed to development of AI Vision and control of electronics

CEG3155 UART Traffic Light Controller *Ottawa, Canada*

University of Ottawa *September 2021 - December 2021*

- Developed a VHDL-based traffic light control system using Finite State Machine (FSM) with one-hot state assignment and Sunggu Lee class equivalence method for state minimization.
- Assembled a prototype for CMOS to RS-232 signal conversion using a breadboard, capacitors, and MAX232 dual transmitter/receiver.
- Created a micro-controller simulated FSM interfacing with UART in structural VHDL.
- Implemented UART's Transmit and Receive Shift Registers using 8-bit PIPO and SIPO shift registers with D Flip-Flops.
- Designed a UART Transmitter with TSR, a 16-bit counter, and D Flip-Flops, enabling ASCII character transmission to an Altera DE2-115 FPGA via the MAX232 Tx connection.

Emergency Call Bell System *Ottawa, Canada*

University of Ottawa *January 2020 - April 2020*

- Implemented back-end services for a real-time emergency response system, with a focus on networking and real-time data processing.
- Developed and integrated networking features for fall detection and automated emergency response, ensuring system reliability and efficiency.
- Worked in a multidisciplinary team, focusing on networking, system analysis, and embedded system programming.
- **Technical Skills:** Networking, Real-Time Systems, Java, API Development, Embedded Programming