# Jonathan Shanmuganantham

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## SKILLS

**Programming:** Python, C++, Javascript, Typescript, HTML CSS, Java, SQL, Object-Oriented Programming

**Technologies:** React, MongoDB, Express, Node, Next, FastAPI, Manifest V3, Bootstrap, Tailwind

**Dev Tools:** Linux, Git/Github, Google Cloud Platform, Docker, Vite, Figma, Kanban

## EXPERIENCE

**Full Stack Developer | ⊕**  San Francisco, California, United States (Remote)
*Codin*  *May 2023 – Dec 2023*

- Implemented server-side rendering with **Next** and **Typescript** which resulted in a ∼40% **increase in organic traffic** and ∼25% **reduction in load times** based on Google Analytics
- Created core React components to enhance functionality and implement business logic; styled using **Tailwind**
- **Dockerized** and integrated **Node Express RESTful API** with 70 endpoints to interact with **MongoDB**
- Configured a **CI/CD pipeline** with Github Actions to trigger unit testing of endpoints using **Mocha** and **Chai**

**Front End Developer**  Toronto, Ontario
*Toronto District School Board*  *Jan 2023 – May 2023*

- Worked with school admin to redevelop the school's site using **HTML, CSS, jQuery**, **Bootstrap**
- Used Color Oracle to make the new site more accessible to those with color blindness
- Used by ∼**1200** students to get notified about school events and access essential information

**Team Captain and Lead Programmer**  Toronto, Ontario
*Robotics Team @ Albert Campbell C.I.*  *Sep 2019 – Jun 2023*

- Designed an **autonomous** multi-terrain Arduino robot using **C++** which won **1st out of 20** teams at UofT's Provincial Space Exploration Competition
- Programmed an **autonomous** wrestling robot with **Python** which won **4th out of 65** teams at Ontario Tech University's SumoBot Competition

## PROJECTS

**Grocery Run | ⊕ | ⊘**  React, Python, FastAPI, Google Maps API, OpenAI

- **Won Hack the Valley out of 80 teams** by building a website to plan shopping trips, find sales, and try recipes
- Engineered **RESTful endpoints** to scrape flyer sites and to calculate shortest trips using **graph theory**
- Leveraged **Google Cloud** to render driving paths and **OpenAI GPT** to produce recipes from shopping lists

**Clip-kun | ⊘**  React, Express, Node, MongoDB, Multer, Cloudinary SDK

- Website that allows users to makes clips from shows in the cloud to share with other users
- Designed **REST API** endpoints using **Express** and **Mongoose** to interface with the **MongoDB** database
- Configured **CRUD** operations with the **Cloudinary SDK** to allow users to manage their media in the cloud

**friended. | ⊕ | ⊘**  Next, Typescript, Tailwind, Supabase, PostgreSQL, OpenAI

- Website that classifies users by information on their LinkedIn and Devpost in order to recommend similar users
- Employed **Next** for server-side rendering and used **Supabase** for Google authentication
- Leveraged **OpenAI embeddings** to perform **vector cosine similarity search** using **PostgreSQL**

## AWARDS & ACHIEVEMENTS

**Governor General's Academic Medal,** Government of Canada
Awarded for having the highest academic standing at the secondary school level (**99.2%**)

**2x Distinction At Canadian Computing Competition (Senior Division)**
Placed in the **top 9%** in the CCC, a data structures and algorithms competition

## EDUCATION

**University of Waterloo**  Waterloo, Ontario
*Bachelor of Computer Science, 2023-2028*
*Societies: Event Co-ordinator @ Computer Science Club, Data Science Club*