

# Jonathan Shanmuganantham

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## SKILLS

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

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

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

## WORK EXPERIENCE

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**Codin** | 

San Francisco, California, United States (Remote)

*Full Stack Developer*

*Sep 2023 – Present, Internship*

- Building a website backed by **UC Berkeley** and the **League of Innovators** for students to share their projects, develop portfolios, and find internship opportunities
- Internship database has been used by **1000+** students
- Created **14 React** components and styled them using **Tailwind**
- **Dockerized** and integrated **Node RESTful API** with **30+** endpoints to interact with **MongoDB** database

**Toronto District School Board**

Scarborough, Ontario

*Front End Developer*

*Mar 2023 – Present, Freelance*

- Appointed by Albert Campbell C.I.'s **Vice Principal** to **lead a team** of 7 students to redevelop the school's website using **HTML CSS**, **jQuery**, and **Bootstrap** with a focus on **UI/UX**
- Projected to be used by **~1200** students to get notified about school events and access essential information

**Robotics Team @ Albert Campbell C.I.**

Scarborough, Ontario

*Team Captain and Lead Programmer*

*Sep 2019 – Jun 2023, Extra-curricular*



- Designed an **autonomous** multi-terrain Arduino robot using **C++** which won **1st out of 20** teams at **UofT's** Provincial Robotics for Space Exploration Competition and an **autonomous** wrestling robot using **ultrasonic technology** which won **4th out of 65** teams at **Ontario Tech's** Provincial SumoBot Competition

## PROJECTS

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**Grocery Run** |  |  *Hack the Valley Winner* React, Python, FastAPI, Google Maps API, OpenAI

- A website for users to determine their most cost-effective and time-efficient shopping trip
- Engineered **RESTful endpoints** to scrape sites for discounts and to calculate shortest paths using **graph theory**
- Leveraged **GCP** to render driving path visualizations and **OpenAI GPT** to produce recipes from shopping lists

**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**

**Clip-kun** | 

React, Express, Node, MongoDB, Multer, Cloudinary SDK

- Website that allows users to make 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 **digital media**

**Competitive Programming**

- Solved **400+** data structures and algorithms problems on Leetcode, HackerRank, and other online judges
- **Ran a club** in highschool to give lectures on computing concepts and to prepare students for contests

## AWARDS & ACHIEVEMENTS

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**Governor General's Academic Medal**

Awarded for having the highest academic standing at the secondary school level (**99.2%**)

**2x Distinction At Canadian Computing Competition (Senior Division)**

## EDUCATION

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**University of Waterloo**

Waterloo, Ontario

*Bachelor of Computer Science*