# Steven Thomas Mathew

stethomat.me
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## Education

Sep 2019 - Present
Expected: May 2023

**University of Toronto (BSc)**

Specialist in Computer Science and Minor in Mathematics.

Received **Dean's List Scholar** award with a GPA of **3.94** (Major: 4.0). Entered with a **$2000** UofT Entrance Scholarship.

## Technologies

| | |
|---|---|
| **Languages** | Python, Java, C, Go, Typescript, HTML, CSS, Rust, SQL, bash |
| **Frontend** | React, Next, Tailwind |
| **Backend** | Node, Express |
| **Databases** | MongoDB, PostgresQL |
| **Tools** | Git, Unix, Postman, Makefile, Docker, Neovim, tmux |

## Experience

**illuminote**
**@ Hack the North**

repo
devpost
demo

Pair-programmed a mixed-reality multiplayer game submitted to University of Waterloo's Hack the North 2020++ written in **Pygame** and **OpenCV**.

Accurately applied a transformation matrix to the screen contour to warp the image to a regular perspective.

Used canny edge detection to extract features from sticky notes on the screen to design the game map allowing the players to interact with the real world.

**argus.**
**@ Hack the 6ix**

repo
devpost

Built a real-time accident detection solution for CCTV footage leveraging **TensorFlow**'s machine learning model in **Python** at Hack the 6ix.

Reports road accidents immediately to the web and phone via **Express** and Twilio API to reduce response time for assistance accommodations.

Accurately reports the location of the crash using Google geolocation and shows truncated footage of the crash.

## Projects

**readme.**
repo

Developed a fully-featured backend for curating projects targeted towards developers. Posts include comments and a voting system much like Reddit.

Designed a scalable, maintainable RESTful API using Typescript, Express, and Postgres.

Engineered performant, robust code with resilient error and exception handling, and used JWT authentication middleware to persist session information.

**kNN-predict**
repo

A lightweight handwriting recognition tool written in **C** using k-nearest neighbors (with Euclidean and cosine distance heuristic functions) trained on the MNIST Dataset.

Used **parallelism** to efficiently distribute classification over multiple cores in the CPU.

Increased speeds up to **x64** using this multi-threaded approach.

**Competitive Progamming**
repo

A repository containing over **400** competitive programming solutions to online judges such as Codeforces, DMOJ, and Leetcode written in C++, Java, and Python.

Included a C++ open-source library of **blazingly-fast** templates for algorithms and data structures. Covered topics on Graph Theory, Dynamic Programming, Data Structure, and more.

**Personal Website**
demo

Engineer and maintain a website using React, Typescript, Next.js, and Tailwind.

Ship a blog with live markdown preview and LaTeX rendering support, deployed through Vercel.