

Nathaniel Mastracci

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EDUCATION

Sheridan College

Honours Bachelor of Computer Science (Mobile Computing)

Oakville, ON

Sep. 2019 – Dec 2023

Sheridan College

Computer Systems Technician - Software Engineering

Oakville, ON

Sep. 2015 – April 2018

EXPERIENCE

Artificial Intelligence Research Assistant

Jan. 2023 – April 2024

Sheridan Centre for Applied AI

Oakville, ON

- Developed an AI model using Python and TensorFlow for the classification of heart sound audio captured through a electronic stethoscope
- Researched relevant academic works to refine the model and improve accuracy to 75%
- Published and presented a 6-page paper detailing our research efforts and development process

Artificial Intelligence Research Assistant

May 2022 – Aug. 2022

Sheridan Centre for Applied AI

Oakville, ON

- Developed cross-lingual voice clone models with Python and scikit-learn to produce AI-generated lip-synced videos
- Explored paid and open source voice cloning solutions to identify tools and features currently available
- Presented project outcomes to an industry partner

Front End Developer

July 2019 – April 2020

Claret Asset Management

Montreal, QC

- Developed the frontend of a web application with Angular serving data from a REST API
- Created responsive UI features to improve user experience
- Implemented form validation and error handling to ensure reliable data input
- Collaborated on the development of a SQL database

PROJECTS

Collectors | *JavaScript, Node.js, React, Express.js, TailwindCSS, PostgreSQL, Postman*

Sep. 2025 – Present

- Developed a full-stack web application using Node.js serving a REST API with React as the frontend
- Used React Barcode Scanner library to scan barcodes
- Implemented UPCItemdb's API to get data on a user's scanned items

Clearer | *Kotlin, React, Firebase Firestore/Authentication, JUnit, Google Cloud Platform*

Sep. 2022 – Dec. 2023

- Developed an assistive reading application using Kotlin and Firebase
- Created a web application in React to manage data stored in the backend
- Implemented OpenAI's API to create reading problems used in the application
- Utilized Google Cloud functions to collect user data

TECHNICAL SKILLS

Languages: Python, JavaScript, Kotlin, HTML/CSS, Java, C#, SQL (PostgreSQL, MSSQL, MySQL)

Frameworks: React, Angular, Node.js, Express.js, TailwindCSS, JUnit

Developer Tools: Git, Postman, Google Cloud Platform, VS Code, Visual Studio, Jupyter Notebook

Libraries: pandas, NumPy, Matplotlib, TensorFlow, scikit-learn