

Manuel Stefan Christopher

✉ ms2chris@uwaterloo.ca | 🏠 mschristophers.github.io/personal-website | 📧 mschristophers | 📺 mschristophers

Skills

Languages: JavaScript, Python, HTML/CSS, Java, C/C++

Tools: React, Next.js, Node.js, Firebase, Bootstrap, AWS, GCP, MySQL, Flask, Git, REST, Postman, Jupyter, Scikit-learn

Experience

Unlimited App

Waterloo, Ontario

FULL STACK WEB DEVELOPER

May 2021 - Sep 2021

- Developed the website of a social networking startup focused on digital art enthusiasts (**Unlimited App**) and professionals (**Karir.io**) using **React**, **Next.js**, **Material UI**, **Flask**, **SQLAlchemy**, **MySQL**, **AWS**, and **Postman** (for API testing).
- Built the Challenge feature, a timed art repository with an integrated rewards system, accounting for **80% of the web traffic**.
- Enhanced the Comment feature by adding likes and subcomments, which contributed in increasing the comment activity by **250%** and web traffic by **400%**.
- Optimized processing of fetched JSON data by rewriting functions, reducing the runtime by **10%**.

Projects

RemCol | React, GCP, Node.js, JavaScript, Material UI

- Built a website at **Def Hacks Global 2.0** that allows students and teachers to collaborate real time with **React** and **GCP**.
- Led a team of 4 in designing the website's layout and determining the content and features.
- Incorporated a collaborative whiteboard with **JavaScript** and an instant messaging system for teachers and students to discuss.
- Selected for **Google's COVID-19 Hackathon Fund**, allowing the team to receive up to **\$5,000 cloud credits** and guidance from Google developers.

Songful++ | React, Node.js, Material UI

- Built a website at **Hack the North 2021** that allows users to create a music playlist with stories with **React**.
- Utilized **Spotify's Web API** to go through authorization requests to fetch Tracks and Albums, where the **OAuth 2.0** authorization framework is used for authentication.
- Used **Coda API** to get songs from the **Coda** documents, allowing users to easily add songs and manage their playlists.

VehicleBuy | React, Node.js, Firebase, DataStax Astra, Material UI

- Built a platform at **RamHacks** that assists users in purchasing used vehicles with 2 versions available: iOS and Web.
- Performed web scraping on CarMax's website to collect car and dealership data, where it was fetched into a **DataStax Astra** database, which is then connected to the frontend.
- Utilized **MapKit** (part of **Google Firebase ML Kit**) to determine the shortest possible route between two destinations and **VisionKit** (part of **Google Firebase ML Kit**) to recognize texts from scanned IDs for verification purposes.

Market Sentiment | Python, Jupyter, Scikit-learn

- Built a **Jupyter** notebook on **Google Colab** that predicts the market sentiment based on top news headlines with **87% precision**.
- Used **Pandas** to retrieve historical Dow Jones values and top news from certain time periods to be trained.
- Utilized **VADER Sentiment Analysis** to get sentiment and polarity scores each day.
- Implemented **Linear Discriminant Analysis (LDA)** from **scikit-learn** to train the **NumPy** datasets.

Awards

- Best Use of Google Cloud - COVID-19 Hackathon Fund at **Def Hacks Global 2.0** for **RemCol** (2020)
- 2nd Best Project (Advanced Track) at **Def Hacks Global 2.0** for **RemCol** (2020)
- Best Use of DataStax Astra Challenge in VCU's **RamHacks** for **VehicleBuy** (2020)
- Faculty of Mathematics Global Scholarship **\$25,000 - Highest Value** (2021)
- Indonesia National Science Olympiad Qualifier in Mathematics (2019, 2020)

Education

University of Waterloo

Waterloo, Ontario

CANDIDATE OF BACHELOR OF MATHEMATICS

Sep 2021 - Apr 2026 (expected)

Relevant coursework (in progress): Functional Programming (advanced), Algebra and Proofs (advanced), Calculus 1