Matthew Proctor

Software Developer

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Education

Bachelor of Computer Science,
Carleton University
09/2018 – 04/2023 | Ottawa, Canada

- Carleton Web Development Club
- Minor in Psychology

Experience

Software Developer,
Telegraph Road Entertainment
04/2020 – 08/2020 | Toronto, Ontario

- Significantly contributed to the company's transition and presence on online retailers.
- Developed software in **Python** and **JavaScript** to assist team members in the production of content for products.

Languages

C# | TypeScript | SQL | JavaScript | Python | C++ | Java | Rust

Technologies

React | Git | Node.js | MongoDB | Data Structures | MaterialUI | Linux CLI | PyNaCl | Google Tink

Projects

Vault, *a storefront for music productions with made with React*

- Developed a dynamic website with audio playback functionality, written in TypeScript for robust typing, and styled using **Material UI** for a sleek, responsive design.
- Utilized component composition, **state lifting**, and memoization for an efficient and scalable architecture.
- Hosted the website on **AWS**, leveraging Amazon **S3** for storage, ensuring reliable data management.

SnapAssistant, *a versatile Python-based Discord service, managing audio, text, and images*

- Implemented the discord.py **API** to integrate with Discord, an online chat messaging application.
- Utilized **asynchronous** function design to manage large amounts of user requests, returning responses in a quick and timely manner.
- Built functionality to query user chat history and plot information using the **matplotlib** package.

KLA Listing Alerts, *a marketplace service powered by Node.js and JavaScript*

- Offers users a real-time alert system by leveraging an on-prem server using **Apache**. Promptly notifying users when a new listing is created that matches their specific requirements, enabling users to stay ahead in their search.
- Implemented security measures including **input validation**, authentication, and authorization to protect user data and ensure a safe user experience.

Cryptographic Libraries Analysis,
Implementation and Analysis of PyNaCl and Google Tink Cryptographic Libraries

- Implemented Operations: **Key generation**, encryption, decryption, signature operations, and **MAC operations** using both libraries.
- Evaluation Factors: The project assessed ease of use, security features, and limitations of PyNaCl and Tink, including API design, **key management**, and algorithm choices.

Nourish, *Modern website written in JavaScript*

- Utilized Pug **templating engine**
- Implemented dynamic loading of restaurant information and menus from multiple restaurants.