David Zhou

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Skills

- Python, Java, Git, React, MongoDB, Docker, Spring Boot, VHDL, OCaml (F24), C(F24), OOP
- Frontend, Backend, Full-Stack, Algorithm and Data Structure - *180+ LeetCode problems solved*
- English, French, Chinese (Native proficiency)

Experience

Research Assistant **National Research Council Canada** **Summer 2024**

- Led the design and development of an innovative marker tracking algorithm for the open-source medical research project, MCSTrack, utilizing Python, OpenCV, and FastAPI.
- Developed and implemented performance testing tools to rigorously evaluate the algorithm's efficiency and accuracy.
- Delivered a concise 3-minute quick pitch presentation of my research paper to a board of research directors, successfully defending its methodologies and findings.

Projects

GitHub **My Movie List** **09/2024**

- Developed a full-stack personal movie tracking application allowing users to search, rate and organize movies from the TMDB database using React, Spring Boot, MongoDB, and Docker.
- Designed and implemented 6 frontend components, and 2 backend services to efficiently manage database connections and API integrations.
- Integrated CI/CD pipeline, including pull request workflows and unit testing to ensure streamline deployment.

GitHub **Magic Chalk** **11/2023**

- Led the design and development of an educational tool that leverages AI for hand gesture recognition.
- Trained an AI model with 97% accuracy to recognize handwritten numbers.
- Developed the frontend using Streamlit and integrated technologies such as MediaPipe and OpenCV.

GitHub **AuthentInk** **10/2023**

- Developed a signature forgery detector using a Siamese Neural Network with OpenCV and PyQt5.
- Implemented a user camera to capture handwritten signatures and evaluate their resemblance to authentic signatures stored in a database.

Education

Bachelor of Software Engineering (Co-op) **McGill University**

Montreal, QC **09/2023 - 05/2027 [Expected]**

- Cumulative GPA: 3.91 / 4.0

DEC: Pure & Applied Science **Marianopolis College**

Montreal, QC **08/2021 - 05/2023**

- Mention in the Dean's Honor List for Fall 2021, Winter 2022, Fall 2022 and Winter 2023, Marianopolis College