Nathalie Redick

United States & Canada

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SKILLS

Programming Languages: Python, C++, C, Java, R, Julia, MATLAB, HTML/CSS, OCaml, MIPS Assembly.
Tools: Git, Unix, LaTeX, Jupyter, AWS EC2, VS Code, QGIS, ArcGIS Pro, Microsoft Office Suite, Windows, MacOS.
Inter-personal Skills: Effective communicator & problem-solver who is adaptable, creative, & motivated.

EXPERIENCE

Data Science Intern @ *Esri*   *Remote* | May 2022 – Aug. 2022
- Implemented an automated workflow for updating national hydrography datasets using Esri's Multi-Task Road Extractor **deep learning** model.
- Improved the baseline ML model by designing new input image layers & geomorphological indicators.

Project Manager @ *RedQuoin*   *Wilton, NY* | May 2021 – Aug. 2021
- Facilitated communication between the software engineer, business consultant, & the head of the start-up.
- Conceptualized the design of the software's UI/UX & visual identity to improve user experience.

Software Development Consultant @ *Redbud Development*   *Wilton, NY* | Jan. 2020 – Aug. 2021
- Designed & built a macOS desktop app in Python that is used to process project budget data for clients.
- Implemented the app into the workflow reduced proposal creation time by 95%.

Software Engineering Intern @ *Blue Spiral Interactive*   *Saratoga Springs, NY* | May 2019 – Aug. 2019
- Strengthened in-house marketing analysis software by working with a team to build a **RESTful API** for accessing & visualising marketing data.
- Individually developed a pipeline in Python to standardise 10GB of NYS voter registration data for mapping on QGIS. The results were designed to advise a spatially-informed political campaign strategy.

Software Development Intern @ *Garnet River*   *Saratoga Springs, NY* | Feb. 2019 – Jun. 2019
- Evaluated the efficacy & usability of computer vision products from Microsoft, Google, & AWS.

PROJECTS

U-Net Tool For Geospatial Analysis | *Undergraduate Research*   Sep. 2022 – Present
- Collaborating with Dr. Matthew Tarling to implement a U-Net image segmentation model that can be used by researchers to analyze geospatial problems.
- Our objective is to create a tool that can be use by anyone, regardless of their computer science background.

Using Machine Learning to Identify Landslides | *Demo*   May 2021 – Present
- Independently designed a research project to implement an image segmentation ML model to identify landslides using new geological and physical indicators.
- Collaborating with the CGS to implement new methods into the landslide identification workflow & to improve the performance of the model.
- Current interation of the model boasts 95.3% accuracy & a loss of 0.19.

EDUCATION

McGill University (3.71 / 4.00)   *Montreal, QC* | Sep. 2019 – May 2023
- B.A. in **Computer Science** with a Minor in **Earth & Planetary Sciences** & a Supplementary Minor Concentration in Computer Science.

EXTRA-CURRICULARS

Member | *McGill Artificial Intelligence Society*   Sep. 2022 – Present
- Participated in monthly discussions on AI, attended workshops, & participated in other events.

Vice President Communications | *The Monteregian Society at McGill University*   Sep. 2022 – Present
- Managed communications for the undergraduate student council for Earth & Planetary Sciences.
- Designed & built the council's website to host student resources, events, & other information.

AWARDS

Best Design & Most Creative @ McHacks9   Jan. 2022
Best AI Hack for Art @ MAIS Hacks 2021   Oct. 2021
Best Overall Hack @ MAIS Hacks 2020   Oct. 2020
Geotop 2021 Scholarship Competition (*$1500*)   *Geotop* | 2021
Alma Mater Scholarship (*$3000*)   *McGill University* | 2019
Stat Staff Professionals Computer Science Scholarship (*$1000*)   *Saratoga Springs High School* | 2019