Junxing (J.C.) Chen, Ph.D.

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SKILLS

General: Teamwork, Research, Problem solving, Presentation, etc.
Programing Languages: Python, MATLAB, R, SQL, Javascript, Docker, HTML, CSS, etc.
Machine learning: Discriminative-Generative/(Un-)Supervised Models Algorithms, Transformers, Visualization etc.
Mathematics & Statistics: Bayes' theorem, Finite Difference Methods (FDMs), Markov chain Monte Carlo (MCMC) etc.

EXPERIENCE

Data Scientist Intern

IBM, Canada | September 2022 - June 2023

- Led development of 100+ machine learning projects, enhancing model efficiency using TensorFlow, PyTorch, and platforms like Hugging Face and IBM Watson.
- Orchestrated the creation of AI-embedded application, integrated into the IBM Watson ecosystem, including fine-tunning and deployment of Large-Language-Models (LLMs) (e.g. Llama 2, GPT-4) for AI assistant applications.
- Utilized Watson NLP to analyze sentiment from various sources, including product reviews, Twitter comments, and user audio recordings.
- Managed a 10-person team and produced top-rated (4.7 stars) data science content for the Skills Network, reaching over 7 million individual users and 150+ companies worldwide.

Doctoral Researcher & Software Developer

University of Toronto, Canada | August 2018 - November 2023

- Developed DIFFUSUP (website link, paper link), a thermodynamic modeling software cited in academic papers and featuring a user-friendly Graphic-User-Interface (GUI) utilizing FDMs like Crank-Nicolson method for solving Partial Differential Equations (PDEs).
- Published research work in top scientific journals, including prestigious one in Nature Communications, and presented findings at top-tier science conferences such as AGU.
- Applied computational skills and Earth & planetary knowledge to physically model Venus and Earth tectonic evolution.
- Conducted geochemical data analysis and utilized MCMC method for model calibration, resulting in publications in the Journal of Petrology.
- Educated 500+ graduate and undergraduate students in various environmental, earth science, and numerical modeling courses.

Data Analyst Intern

University of New Mexico, USA | June 2017 - September 2017

- Processed Brillouin laser experiments data, published in Scientific Reports.

Data Analyst Intern

China National Petroleum Corporation Logging Company, Southwest, China | June 2016 - September 2016

- Analyzed and visualized electrode resistivity and Gamma-ray logging data for several multi-million natural gas projects.

EDUCATION

Doctor of Philosophy

University of Toronto, Canada | Earth and Planetary Science | August 2018 - September 2023

- Awarded Naldrett. A.J scholarship, Nowlan explorers' scholarship, Bedell explorers scholarship, etc.

Bachelor of Science

University of Science and Technology of China, China | Earth and Planetary Science | August 2014 - June 2018

- Awarded outstanding student scholarship (Top 5% student award)

VOLUNTEER & ACTIVITIES

- Data science community contributor, constructed 10+ related free Medium articles.
- Active Level 6 soccer match official in Canada soccer association, judging for ~50 games per year.