Junxing Chen

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Portfolio Wesbite | GitHub | Linkedin

Skills

- **General:** Teamwork, Research, Problem solving, Scientific writing, Presentation etc.
- **Programming Languages:** Python, MATLAB, R, SQL, JavaScript, Docker, Git, HTML, CSS, etc.
- **Machine Learning:** Discriminative-Generative/(Un-)Supervised Models Algorithms, Computer Vision, Large-Language-Models (LLMs), Transformers, Visualization, etc.
- **Mathematics:** Statistical Modeling, Bayes' theorem, Finite Difference Methods (FDMs), Markov chain Monte Carlo (MCMC), etc.

Experience

Data Scientist Intern | IBM Markham, 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-tuning and deployment of LLMs (e.g., Llama 2, GPT-4) for AI assistant applications.
- Utilized Watson NLP for analyze text from product reviews, Twitter comments, and user audio recordings, etc.
- 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 | University of Toronto Toronto, Canada | August 2018 - November 2023

- Developed DIFFUSUP (website, paper), a thermodynamic modeling software 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 one in Nature Communications, and presented findings at top-tier science conferences such as AGU with 20000+ attendants.
- 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.

Student Researcher & Analyst | University of New Mexico Albuquerque, USA | June 2017 - September 2017

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

Analyst Intern | CNPC Logging, Southwest Chongqing, China | June 2016 - September 2017

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

Education

Doctor of Philosophy | Earth and Planetary Science
University of Toronto Toronto, Canada | August 2018 - November 2023

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

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

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