

John Feng

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Concepts: Large Language Models, Prompt Engineering, AI Engineering, NLP, Time Series Analysis, Deep Learning, GPT, Statistical Modeling, Regression, Classification, Data Visualization, LLMs, Scraping

Python libraries: Pandas, Tensorflow, PyTorch, Scikit-learn, SQLAlchemy, SpaCy, Streamlit, PySpark, Flask, Scrappy, BS4, Langchain, OpenAI

Visualization: Tableau, Powerpoint, Python: Plotly, Matplotlib, Seaborn, Streamlit

Other tools: Git, AWS cloud, Docker, SQL

EDUCATION

Ph.D. in Physics, University of Toronto

2015-Dec 2022

- [Van Kronecker Teaching Assistant Award](#) (2020-2021)
- [3-minute thesis University of Toronto finalist](#) (2017, 2018)

Masters of Science, Physics, University of Toronto

2014-2015

BSc. Honours, Physics and Human Biology, University of Toronto

2008-2013

RELEVANT EXPERIENCE

AI Engineer – [Brave Career](#) (freelance)

Jan 2025 – Present

- Build AI agent for conducting mock interviews to help clients prepare for job applications
- Create automatic data pipeline for Supabase PostgreSQL database
- AI agent can conduct interview, evaluate interview performance, and help clients improve interview performance
- Use LiveKit for realtime audio and video interaction with AI agent

Applied Scientist in Detector Physics team – [Redlen Technologies](#)

Oct 2023 - Present

- Develop and execute test methods to characterize semiconductor devices, analyzing results to improve device performance
- Analyze data from Factory Accepted Testing (FAT) to derive insights and actionable improvements in our product
- Code Python scripts for automated data acquisition and analysis
- Write reports and present project proposals for technical and business audience
- Create sophisticated data analytics dashboards with Python Streamlit and JMP. Implement cleaning + extraction data pipelines.

AI/LLM Developer (contractor) - [Aggregate Intellect](#)

Jun 2023 – Oct 2023

- [College admissions chatbot helper](#): Scrape college websites for admissions details and program specific information using Python Scrappy library
- Create conversational chat interface that queries from scraped information and SQL database, to help international students find ideal programs and specific college application requirements, built with latest **LLM** integration packages in **Langchain**. Details reported [here](#).
- Collaborated with an agile team of software developers for deployment in user-friendly app.
- ML-OPS: deploy and monitor applications, constantly making improvements based on client's feedback.
- Contribute to community open-source project Sherpa, AI agent embedded in Slack for reasoning and answering queries

Machine Learning Engineer - **Branchy Solution**

Dec 2022 - May 2023

- Collaborated with a client throughout requirement gathering, project scope definition, solution architecture, and implementation of a comprehensive pipeline in Python for efficient table extraction from images
- Thoroughly investigated and compared multiple approaches, customized Microsoft's open-source **DETR (transformer-based) model** on **Hugging Face** to automatically extract tabular information using **Google Vision API's** OCR functionality
- Developed a user-friendly application enabling clients to upload files in bulk, resulting in a monthly time-saving of **100+ hours**
- User-friendly public version of app: <https://table-extractor-johnnykfeng.streamlit.app/>

Research Assistant - University of Toronto

2015-2022

- Processed and cleaned raw data from [ultrafast electron diffraction experiments](#) via SQL and Python
- Prepared detailed data visualizations with Python for publication in a scientific journal
- Presented my research to both public and technical audience on various occasions, e.g. global scientific conferences, local university committee of professors, public speaking competitions
- Led a large-scale project involving multiple collaborators across the world (details written in my [thesis](#))
- 10+ years of Python experience, taught Python in university courses

Head of Data Analytics - [HD-RGB](#)

2016-2022

- Co-founded a start-up for modifying older game consoles to output high-definition graphics
- Created an [ETL pipeline](#) for sales and supply cost data
- Analyze data for market insights and to drive revenue growth and profit