Quan Nguyen

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A seasoned data science researcher with over six years of experience in building machine learning, forecasting models on large-scale high-dimensional data, causal inference in observational design, and providing data science consulting services for various industry.

SKILLS

- Python (numpy, pandas, scikit-learn, statsmodel, matplotlib, seaborn, plotly), R, SQL, Unix, Git, Docker, Tableau
- Time-series, supervised/unsupervised learning, deep learning, ML/AI fairness, social network analysis, statistical inference, A/B testing with RCTs, causal inference in observational design.

WORK EXPERIENCE

Master of Data Science, University of British Columbia - Instructor

Aug 2021 - current Vancouver, BC

- Instructed and designed various courses in the UBC Master of Data Science program including: Python Object-Oriented Programming, time-series, spatial analysis, supervised and unsupervised learning, statistical inference and A/B testing, presentation skills and technical writing for data scientist.
- Mentored seven teams of data science graduate students working projects across diverse sectors such as finance, sports analytics, and logistics. Collaborated with industry stakeholders to translate business needs into actionable data science solutions and project deliverables.
- Developed comprehensive project roadmaps, ensured timely delivery, provided hands-on advice on methodologies, conducted code reviews, and offered constructive feedback on technical reports and presentations. Examples include:
  - Analyzing crypto trading patterns through large-scale transactional data
  - Extracting soccer formations from optical tracking data
  - Creating real-time energy pricing forecasts
  - Optimizing price surging models to incentivize shippers

Master of Data Science, University of Michigan – Researcher & Lecturer

Oct 2019 - Aug 2021 Ann Arbor, MI

- Led a $30,000 project, funded by the Michigan Data Science Institute, to analyze students' mobility patterns on campus for post-COVID-19 campus planning.
- Applied social network analysis and unsupervised learning techniques to analyze students' movements on campus from large-scale Wi-Fi location data (containing billions of rows) covering 50,000 users.
- Collaborated on a large-scale multi-institutional project totaling over 200,000+ students, sponsored by Google, to evaluate the trade-off between fairness and accuracy of student dropout prediction models across institutions. Develop bias mitigation techniques via ensemble learning.
- Developed and taught four courses in the online Master of Applied Data Science, including data manipulation, data mining I & II, and learning analytics.

The Open University – Data Analyst

Oct 2016 - Oct 2019 Milton Keynes, UK

- Developed and implemented predictive models of academic performance using students' demographic information and clickstream data from Learning Management Systems using R, SQL, SAS.
- Designed a Tableau dashboard to generate comprehensive reports on the progression, qualifications, and performance of over 200,000 students in real-time.
- Served as a data consultant in multiple national projects to evaluate the impact of educational interventions using pretest-posttest observational design. Provided advice on data collection, study design, and project evaluation.

EDUCATION

2019 – 2021	Postdoctoral Fellow, Education Data Science, University of Michigan – Ann Arbor, US.
2016 – 2019	Ph.D., Learning Analytics, Open University UK.
2015 – 2016	M.Sc. Economics, Maastricht University, Netherlands (with distinction).
2012 – 2015	B.Sc., Economics, Maastricht University, Netherlands.