Vu-Hong-Hai (Hai) Phan

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EDUCATION

Concordia University, Montreal **Winter 2020 - Fall 2022**
Master of Computer Science (thesis) GPA: 4.0/4.3
Awards: Mitacs research fellowship ($40k), Concordia FRS bursaries ($15k).

Hanoi University of Science and Technology (HUST) **Fall 2014 - Fall 2019**
Bachelor of Computer Science (5-years program) GPA: 3.51/4.0
Awards: In-course scholarships, 3rd-prize competitive programming (university-level).

EXPERIENCES

Research Consultant (Mitacs) **EXFO Inc, Montreal** **April 2020 - April 2022**

- Engineered scalable and interpretable machine learning algorithm for automated root cause analysis using Python+Spark, increasing the diagnosis speed by 20x.
- Surveyed and performed experiments on causal modelling, resulting in a well-received 2 years research plan and providing demonstrations every month.
- Collaborated with team of domain experts, published 10+ internal documents and codes; one patent and one conference paper (both first-authored).

Data Scientist **Viettel, Hanoi** **Jun. 2019 - Nov. 2019**

- Architected recommender systems using Python, Hive, Spark and Redis, serving 1M+ customers daily, in soft real-time, with 5x pickup rates uplift, averaging $100,000 USD revenue/month.
- Developed proprietary framework for large-scale RCT, supporting A/B testing and multi-armed bandit, with automated reporting features.
- Overhauled music recommender system using topic modeling, achieving 10x pickup rate increase.

Research Assistant **HUST, Hanoi** **Mar. 2017 - Jun. 2019**

- Engineered DL translation model in Tensorflow, bested Google & Bing Translate in BLEU metric.
- Collected, pre-processed corpus data using Python and web crawlers, resulting in nearly 1M pair of sentences.
- Coordinated research team of six people, published multiple papers and seminars, of which two are first authored.

Software Engineer (part-time) **Viettel, Hanoi** **May 2017 - Jun. 2018**

- Architected and maintained set of RESTful endpoints for chatbot, using Java, Python Flask, C++ and Apache Solar, achieving classification accuracy of 99%.
- Developed automatic data filtering process using Python + MySQL to move data to labelling platform, reduced low-quality data by 50%.

PROJECTS

Arithmetic Encoder (2023)-Github. A Python library for encoding and decoding text data using statistical estimators.

SKILLS

Languages: Python, Java, SQL, C/C++, LaTeX, Bash, Matlab/Octave, HTML/CSS, Scala

Frameworks: Pandas, PyTorch, Tensorflow, Numpy, Scikit-learn, Plotly, Flask, PyTest, XGBoost, SciPy, Apache Hadoop, Apache Spark, Git, Docker, Gitlab CI/CD, Jenkins, Pentaho DI, MySQL, ORACLE, MSSQL(exposure), Redis, MongoDB, Tableau (exposure), GCP (exposure), AWS (exposure)

Natural Languages: English (fluent), French (elementary), Vietnamese (native)