Alex Bie

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EDUCATION

University of Waterloo BMath, Computer Science | 2016 - Present
- 91% Academic Average

SKILLS

Languages Python ▪ C/C++ ▪ Matlab ▪ Java/Scala ▪ R ▪ JavaScript ▪ OCaml

Technologies NumPy/PyTorch/TensorFlow ▪ Linux ▪ Node.js ▪ Git ▪ LaTeX

Coursework
- Computational Vision, Intro to Machine Learning
- Operating Systems
- Statistics, Calculus, Linear Algebra, Analysis & Measure Theory

EXPERIENCE

Assistant Researcher Huawei Noah's Ark Lab
Sep 2019 – Dec 2019 | Montreal
- Applied research in automatic speech recognition (ASR)
- Explored and evaluated techniques for speeding up deep learning models for use on mobile devices
  Resulting work in submission to ICASSP 2020: `https://arxiv.org/abs/1911.03604`
- Worked with product team to train models on internal datasets to prototype Chinese ASR systems
- Investigated techniques for robust and far-field speech recognition in university collaboration

Undergrad Research Assistant University of Waterloo
May 2019 – Aug 2019 | Waterloo
- Worked part-time with Dr. Olga Vechtomova on the task of *text simplification*
- Implemented baseline methods and conducted a literature review, presented during weekly seminars

Research Student National Research Council of Canada
Jan 2019 – April 2019 | Ottawa
- Worked with Dr. Yunli Wang (Multilingual Text Processing Group) on applying deep learning to NLP tasks (topic modelling & text style transfer)
- Performed a literature review for the task of *text style transfer*
- Implemented SOTA methods in PyTorch and summarized experimental results/observations in a technical report + talk

Software Developer TradeRev
May 2018 – Aug 2018 | Toronto
- Leveraged multi-threading and eager queries to speed up financial report generation (12 days → 5 hours)
- Worked on refactoring components of a legacy financial system (Java) into microservices (Node.js)
- Performed production debugging/hotfixes for financial system seeing over $2,000,000 in daily throughput

PROJECTS & EXTRACURRICULARS

Text Editor C++, ncurses
Vim-like modal text editor designed with RAII and extension in mind. Supports a limited, growing set of commands. We drew up the full UML before coding.

Calculus TA University of Waterloo
Part-time tutor teaching assistant under the Faculty of Math to help students with Calculus I & II.