Brian Bi

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Experience

Bloomberg — Senior Software Engineer (06/2022–present)
Design and develop C++ libraries within the Bloomberg Basic Development Environment (BDE), which provides building blocks for C++ software across the firm, including backports of the C++ standard library. Advance the interests of Bloomberg and the wider C++ community through participation in the C++ standards committee.

Citadel Securities LLC — Software Engineer (08/2018–03/2021)
As part of the Low Latency Engineering team, built a new system for processing market data with improved modularity compared to the old system, 2.5% better latency on average and 23% better 95th percentile latency for the most expensive input types. As part of the ETF Tech team, built a new server for deploying parameter values to trading strategies through Apache Kafka. All work was done in C++14.

Google, Inc. — Software Engineer (11/2014–07/2018)
Built a full-fledged PDF to HTML converter for Google Scholar from the ground up using modern C++11 idioms. Also worked on OCR, data backup, citation counting, and miscellaneous maintenance tasks in C++ and Python.

Education

Bachelor of Science — University of Toronto, 2014
Double major, physics and chemistry.

Achievements

- C++ gold badge on Stack Overflow (profile: http://stackoverflow.com/users/481267/brian)
- Top 200, 2013 William Lowell Putnam Mathematical Competition
- 12th place team (University of Waterloo), 2011 ACM-ICPC World Finals
- Silver medal, International Olympiad in Informatics (2010, 2009)

Projects

- PEG Judge (http://wcipeg.com) — an online judge for algorithmic contest problems. Includes both a website and a backend server that compiles user-submitted code and uses Unix system calls to sandbox its execution. Retired in 2020.
- Common algorithms and data structures for the ACM-ICPC (https://github.com/t3nsor/codebook)
- PEGWiki (http://wcipeg.com/wiki) — a wiki devoted to algorithmic techniques for programming contests

Other skills

- Familiarity with C, JavaScript, PHP, SQL, x86 assembly language
- Experience administering a GNU/Linux server running services such as HTTP, mail, and IRC

The latest version of this document may be found at http://brianbi.ca/resume
The HTML version includes hyperlinks.