Jiasen Xu

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About

- Passionate programmer since 2003 (when I was only 11, using Pascal and GW BASIC on an e-dictionary)
- Seasoned engineer who loves large scale distributed systems, from architecture to construction to operations.
- Results deliverer with strong sense of ownership. Skilled in project planning and project status communication with the management team. Able to break down complex and ambiguous problems into concrete and tangible pieces, and have them properly delegated if needed.
- Fast learner that can pick up any programming languages within hours, understand complex solution/architecture within days, and start making meaningful contributions within weeks in every team ever worked with.

Experience

- **Tech Lead, Software Development Engineer** — Vancouver, Canada
  Amazon, AWS Step Functions — *2019 - present*
  - AWS Step Functions is a serverless workflow orchestrator that makes it easy to connect multiple AWS services into business-critical workflow applications, and run reliably without you having to write code.
  - Built CloudWatch Log Integration for Step Functions customers to gain insight on their execution history. Can support log throughput of 50k events/s on a single host with total throughput scales linearly with fleet size.
  - Built Nested Workflow that allows customers to start a workflow from within a workflow. Exponential growth in adoption since release, and has supported more than 5 billion nested workflow executions to date.
  - Built PrivateLink support for Amazon Managed Workflow for Apache Airflow (MWAA) that allows enterprise customers to connect with the service endpoints without exposing traffic to the Internet. Fully automated infra provisioning that supports 0-click region build, which greatly reduces both maintenance cost and time-to-deliver. Idea shared via internal broadcast channel, and has been adopted by at least 5 other AWS service teams.
  - As the team lead, other than building good stuff as listed above, I also coach my team by providing 1on1s and knowledge sharing sessions, bar raise operation practices, review and sign-off code changes and technical designs, provide clear status update for ongoing projects, help streamline team processes, influence road map construction and planning, and advise the management team with information backed by data.
- **Software Development Engineer** — Vancouver, Canada
  Microsoft, Bing Ads — *2017 - 2019*
  - Conducted performance optimization on large scale distributed system – bottleneck analysis, A/B testing, instrumentation, data pipeline building and visualization. Latency of optimized APIs are down more than 80%.
  - Migrated DNS management for Bing Ads from F5 Network to Azure DNS with zero downtime.
  - Streamlined TLS certificate rotation that reduced risk of expiry and human operations to zero.
- **Software Developer** — Vancouver, Canada
  SAP, SAP Analytic Cloud — *2016 - 2017*
  - Worked on rich front-end SaaS cloud application for BI analysis
  - Optimized page loading performance by introducing lazy loading design pattern. 20% of time saved on average.

Open Source Contribution

- **Static Interval Analysis for Java**
  The Checker Framework — *2016 - 2017*
  - By introducing the @IntRange annotation and a complex set of range maths, the flexibility and the precision of the static Interval Analysis are greatly improved, making it possible to catch potential runtime exceptions like *ArithmeticException* and *ArrayIndexOutOfBoundsException*, at compile time.
  - Self-proposed feature incorporated in the latest release. This contribution was acknowledged in a paper accepted by ISSTA 2018 and is adopted by Google Guava development.

Education

- **University of Waterloo** — Waterloo, Canada
  M.Eng in Electrical & Computer Engineering (Graduate Research Scholarship) — *2014 - 2016*
- **University of Science and Technology of China** — Hefei, China
  B.Eng in Electrical Engineering (National Scholarship) — *2010 - 2014*