Gabriel Silk

Software Engineer

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I started programming on a TI-83 plus calculator, then a 486 when my parents realized I was obsessed with coding. I actually remember when floppy disks were a cool new thing :)

In terms of my career -- I entered college at 14, got a CS degree with a 4.0 GPA, landed my first job when I was 17 at Electronic Arts, worked with big data at Quantcast, then built consumer / b2b software on web / mobile at Nomic.

EXPERIENCE

Nomic

2012 - January 2017 (5 years)

Senior Software Engineer

At Nomic our goal was to build an "Uber for recruiting" -- ie, the provisioning of on-demand recruiting power scalable with the client's needs.

Here's a demo video of "Nomic 2.0", which was our web-based recruiting tool: http:// www.materialtalent.com/nomic_2.0.html

We pivoted a few times during the history of Nomic — the prior version of the product was a mobile app. We realized that recruiters really needed a desktop web app, and so Nomic 2.0 came to be. I did the design and took lead on the front-end effort, mentoring / managing three junior engineers who worked full stack, using our in-house front-end javascript framework. From concept to initial deployment took us under a month, and from there we iterated on the product and ultimately started making money on it.

We experimented with a few different front-end frameworks, including backbone, angular, and React.js, before finally building our own called "o3". It is functional-reactive in nature, with a simple syntax and component model. In o3, components are pure functions that return data, typically a combination of arrays (representing DOM) and streams. We've received a lot of interest in this, and are currently working on open- sourcing o3.

In addition to my front-end work, I played a key role in designing / building the backend APIs and infrastructure, leveraging the skills I gained at Quantcast. We were initially running Node on AWS with MongoDB, and I helped migrate us to Postgres. We eventually adopted Heroku, as it greatly reduced our time spent on ops, albeit at the cost of debuggability of production problems.

I saw Nomic through to the very end, and helped shut down the company and tie up all of our loose ends. It was an unforgettable experience working with great people, and I learned a lot from it.

Primary technologies used were: Javascript / NodeJS, Postgres, Mongo, Redis, ElasticSearch.

Quantcast

July 2010 - October 2012 (2 years 4 months)

Software Engineer

At Quantcast my work focused on the realtime bidding infrastructure (C, C++, Java, redis, memcached, redis, kestrel, Storm), and I worked about 95% of the time in C++. The Quantcast RTB infrastructure is very high throughput (400,000+ requests per second), with strict latency requirements (~60ms per request), which provides unique implementation challenges.

A few things I accomplished:

- started as "Software Engineer I", promoted to "Software Engineer III" by end of first year
- led a system-wide revamping of our IPC infrastructure
- reduced memory usage on our edge servers by an order of magnitude, by writing an LRU cache backed by a slab allocator to store user data
- entered a company hackathon, which resulted in me leading the effort to get Storm into production for our realtime bidding infrastructure

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Eventually I decided to leave so that I could gain experience working in the consumer space, at a smaller company where I could wear more hats -- design, web development, product, business strategy, ops, etc.

Electronic Arts (EA)

January 2006 - September 2006 (9 months)

Software Engineer Intern

During my internship I worked on the "NBA Street" team doing systems work in C++. I initially started out by working on a prototype in C# for an "open world" experience. I created a great prototype in a short amount of time, and my manager decided I should work on the game code itself, which was in C++.

My three main contributions were:

- The playable "open world" prototype (C#), which was used as a demonstration of how this feature would work in the next release of the game
- The "trick tracking" system (C++), which followed the moves you made as a basketball player and gave you bonuses for completing certain types of moves in particular sequences and within specific time frames
- An asset pipeline for artists (C++)

EDUCATION

The University of British Columbia

2004 - 2009

Bachelor's degree, Computer Science,

Graduated with a 4.0 GPA and a 92% average across my CS courses. I also taught classical piano in my spare time, won numerous piano competitions, was a tutor at the disability resource center, and volunteered at Engineers Without Borders.

SKILLS & EXPERTISE

Java, Distributed Systems, C++, Linux, , High Performance Computing, Hadoop, Machine Learning, Big Data, , SQL, PostgreSQL, MongoDB, Node.js, C

LANGUAGES

English (Native or bilingual proficiency)

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