# JIM KANG: RESUME

I've been a software developer since the year 2000. You can reach me at
jimkang@fastmail.com.

# WORK EXPERIENCE

## SABBATICAL

*Nov. 2020 to present*

Childcare, worked on bots, made an animated story in a 2048-byte program for Taper
Magazine, recorded podcasts, made a browser-performed piece of generative music,
maintained various projects.

## SPOTIFY

*May 2016 to Nov. 2020*

- Using vanilla JavaScript, built a kit that allows non-developers (designers and
  researchers) to author full-featured voice prototypes that parse user speech, ask
  questions, and play music. Dozens of prototypes were built and used in user tests
  every two weeks.

- Built a data pipeline that composes and renders thousands of playlist covers each day
  based on the current contents of the This Is playlists using Python, Docker, Node,
  and headless Chrome.

- Built web apps, Chrome extensions, and Electron apps for music content prototypes
  and evaluating and editing algorithmically-generated content.

- Built promotional web sites for features (e.g. Time Capsule).

- Wrote design documents for experimental features for the Spotify iOS client and
  built and A/B tested them.

- Wrote design documents, built prototypes, and designed and administered
  unsupervised user tests for experimental features.

- Designed and administered Qualtrics surveys to gather user data to inform the
  design of an algorithmic playlist.

## HARVARD DEPARTMENT OF CONTINUING EDUCATION

*June 2015 to April 2016*

Made modifications to an open source video app written in JavaScript.

## CHILDCARE

*February 2015 to May 2015*

Spent time at home taking care of my infant son. (The PayPal Boston office was laid off.)

## PAYPAL

*February 2014 to January 2015*

- Built features and fixed bugs on Node backend and Angular front end of the PayPal Shop site, which served coupons from various PayPal partners to hundreds of thousands of people per day.

- Followed test-driven development and pair programming practices. Prioritized mobile web functionality.

## NPR

*June 2013 to February 2014*

- Added OAuth to the Composer API Node server.

- Wrote the first automated tests for the API server.

- Built features for Composer, a browser app used by over 200 NPR member stations used it to add program schedules to their web sites and keep track of music they played, as part of a small Kanban-driven team.

## GHOST CRAB WORKSHOP

*April 2012 to May 2012*

- Started a one-person indie development company.

- Designed and developed Jotunheim, a journal and social media app for iOS.

- Consulted on a product built in Unity 3D.

## MODO LABS

*July 2010 to March 2012*

- Built features and fixed bugs in Objective-C for university clients' iOS apps (e.g. Harvard and MIT apps).
- Maintained PHP back end and HTML/CSS mobile web sites.

## VOTER ACTIVATION NETWORK

*April 2009 to June 2010*

- Contributed to MiniVAN Touch iPhone app in Objective-C and SQL and server side support for it in VB .NET.
- Wrote a WYSIWYG form editor in JavaScript with jQuery.

## OBAMA FOR AMERICA

*2008*

- Analyzed voter file records using MySQL and Perl to help make decisions about canvassing targets.
- Wrote Perl and Greasemonkey scripts to free up staffers that were spending whole days doing tasks manually.
- Helped to win Indiana, which had not been won by the Democratic Party since 1964.

## GN RESOUND

*2004 to 2008*

- Worked on a Windows hearing aid adjustment app code in C++, C#, and SQL.

## INSTALLSHIELD

*2000 to 2004*

- Worked in C++ on IDEs that let users create Windows software installation programs.

# PROJECTS

## INTERACTIVE EXPLANATION OF QUADTREES

jimkang.com/quadtreevis

- Step-by-step explanation of quadtrees that lets learners get hands-on.
- Written in JavaScript using D3.

## CHANNEL VOCODER WALKTHROUGH

jimkang.com/channel-vocoder

- Step-by-step explanation of how the original channel vocoder worked.
- Written in JavaScript using the Web Audio API and D3.

## ANNOY-NODE

github.com/jimkang/annoy-node

- Bindings that allow Annoy, a C++ library used in machine learning for finding nearest neighbors in high-dimension vector spaces, to be used in Node.
- Written in C++ and JavaScript.

## OBSERVATORY

jimkang.com/observatory

Projects visualizer. Check it out to see the rest of my projects.

# EDUCATION

## RECURSE CENTER

*August 2021 to September 2021*

Studied audio DSP (digital signal processing). Participated in and lead study groups and pair programming sessions.

## NORTHWESTERN UNIVERSITY, EVANSTON, IL.

*1995-1999*

BS in Computer Science.

# SKILLS

- JavaScript
- Node.js
- CSS
- Objective-C
- D3
- C++
- SQL
- HTML
- Docker
- Product design
- TypeScript
- Svelte
- Rollup
- Web audio
- Puppeteer, Playwright