

## Experience

- Oct 2021 — Present **Cockroach Labs** NYC (Remote)  
Senior Software Developer — Cloud & Developer Experiences
- Built automatic preview deployments for all UI PRs (think self-hosted Vercel)
  - Benchmarked JSON vs multiple protobuf clients in all major browsers
  - Supported UI build systems & infrastructure for CockroachDB and SaaS site (Bazel and node-native)
  - Reduced CockroachDB UI build times by > 3 minutes
  - Set up real-user monitoring and structured error logging in SaaS UI
- Mar 2020 — Oct 2021 **Hulu, LLC** Seattle, WA  
Principal Software Developer — Living Room
- Led team of 7 devs through complete UI rewrite, from prototyping to launch
  - Implemented Redux pattern in Roku ecosystem
  - Continued public maintenance of Hulu open-source projects (brs, roca, linter)
  - Integrated OSS browser automation framework for webapp UI testing
  - Formal mentor to two other devs
- Mar 2018 — Mar 2020 **Hulu, LLC** Seattle, WA  
Senior Software Developer — Living Room
- Maintained Hulu app on Roku, written in Roku-proprietary language
  - Led team of 5 devs to launch Hulu on Amazon Echo Show
  - Released splitshot (see open-source contributions) to the public, including Hulu Tech Blog post
  - Integrated device-free unit testing for Roku app
  - Became internal point of contact for all Hulu open-source releases
- Mar 2016 — Mar 2018 **Hulu, LLC** Seattle, WA  
Software Developer — Living Room
- Maintained HTML/CSS/JS Hulu app on consoles, smart TVs, etc.
  - Worked with team of 4 to launch profiles support in HTML app
  - Embedded with backend team to build initial version of client-facing content API for live TV
  - Investigated app performance for Hulu with Live TV launch
  - Implemented view-model pattern in backend and in Hulu on Roku
- Apr 2015 — Mar 2016 **Amazon.com** Seattle, WA  
Software Development Engineer II — Marketplace Shipping Services
- Designed, implemented, and launched public API to purchase shipping labels for orders
  - Supported external users during six months of private beta of shipping label web service
  - Coordinated team of six developers working simultaneously in new codebase
  - Supported and advised team of India-based developers for contributions to my team's codebase
- Aug 2013 — Apr 2015 **Amazon.com** Seattle, WA  
Software Development Engineer I — Marketplace Shipping Services
- Reduced fatal errors from 1,100 per million requests to 200
  - Contributed to internal tools to read and transform log data
  - Developed and maintained Java service capable of processing ~1,000 requests per-second (peak)
  - Designed async workflow-based service to buy up to 500 shipping labels & merge into one PDF
- Sep 2012 — Jun 2013 **Drexel University Capstone Project** Philadelphia, PA  
Embedded Software Developer — Waterproof Recording Ammeter
- Designed supporting circuits for PIC 18F microcontroller and sensors
  - Implemented I2C sensor readings via vendor library
  - Implemented data persistence on SD card via SPI via vendor library
  - Built USB serial support for configuration via PC

## Notable Side Projects

- Feb 2023 ○ **caiac** — Code as Infrastructure as Code  
Goal: Have a laugh by writing a Terraform provider that models the Go AST and emits .go files  
Status: Published MVP and frozen  
<https://github.com/sjbarag/caiac>
- Oct 2020 ○ **thcon** — A command-line tool + config file that switches themes in many apps  
Goal: Ease eye-strain by toggling dark mode in multiple tools with fewer steps  
Status: Published and actively maintained  
<https://thcon.app>
- Dec 2017 ○ **brs** — BrightScript interpreter implemented in TypeScript  
Goal: Enable off-device testing by implementing (from-scratch) the language Roku apps are written in  
Status: In use but frozen; forked by Roku dev community  
<https://github.com/sjbarag/brs>
- Aug 2015 ○ **PNRG (Poorly Named Resume Generator)** — Templated resume source generator  
Goal: Reduce effort required to maintain multiple parallel resume formats  
Status: Frozen; updated as-needed  
<https://github.com/sjbarag/poorly-named-resume-generator>

## Notable Open-Source Contributions

- Sep 2020 ○ **git** — Added support for clone.defaultRemoteName config  
Status: Submitted and released in 2.30  
<https://github.com/git/git/compare/54e85e7af1...de9ed3ef37>
- Jan 2019 ○ **roca** — Roku unit testing framework implemented on top of brs  
Status: Developed in public, released, actively maintained with peers  
<https://github.com/hulu/roca>
- Jan 2018 ○ **splitshot** — Generates TypeScript declarations from CoffeeScript sources  
Status: Developed internally, released, frozen  
<https://github.com/hulu/splitshot>
- Sep 2017 ○ **TypeScript** — Automatically inherit JSDoc comments subclasses and subinterfaces  
Status: Submitted and released in 2.7  
<https://github.com/microsoft/TypeScript/pull/18804>

## Education

**Drexel University** — Graduated Jun 2013  
BS in Computer Engineering  
BS in Electrical Engineering (Electronics)  
Minor in Computer Science

Philadelphia, PA  
Cumulative GPA: 3.58 | In-major: 3.63

## Skills

### Languages

- Bash/POSIX shells
- C
- Docker (as needed)
- Java
- JavaScript / TypeScript
- L<sup>A</sup>T<sub>E</sub>X
- Python
- Rust (still learning)

### Operating Systems

- macOS
- Linux (Arch, Debian, Fedora, RHEL, Ubuntu)
- Solaris 9 (briefly)

### Tools

- AWS S3, DynamoDB, SQS, SNS, Lambda
- DBus
- git
- vim

### Paradigms

- Distributed systems
- HTML Single-Page Apps (SPA)
- HTTP REST (client and server)
- Language Interpreters
- Service-Oriented Architectures (SOA)
- SQL and NoSQL databases