Sean Barag

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Experience

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

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**Notable
Side Projects**

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   Philadelphia, PA
BS in Computer Engineering   Cumulative GPA: 3.58 | In-major: 3.63
BS in Electrical Engineering (Electronics)
Minor in Computer Science

Skills

Languages
· Bash/POSIX shells
· C
· Docker (as needed)
· Java
· JavaScript / TypeScript
· LaTeX
· Python
· Rust (still learning)

Operating Systems
· macOS
· Linux (Arch, Debian, Fedora, RHEL, Ubuntu)
· Solaris 9 (briefly)

Tools
· AWS S3, DyamoDB, 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