

RIK BROWN

Brooklyn, NY · +1 (206) 519-8684

rik@rikbrown.co.uk · rikbrown.co.uk · [LinkedIn](#)

EXPERIENCE

Snap, Inc | Big Data

Lead Software Engineer (Client SDKs)

Brooklyn, NY

Jun 2019 - Present

- Tech lead for the Client SDKs used to perform high-volume telemetry collection from Snapchat apps (Android/iOS), devices and websites, including metrics used for business and financial reporting. Working closely with our platform teams and internal customers to ensure accuracy with minimal device and network footprint.
- Redesigned Snap's telemetry protocol with a compact protobuf envelope-based system, reducing disk and bandwidth use by up to 50%. Implemented on Android (Kotlin) and backend (Java/GCS).
- Built Typescript Web SDK + React supporting components to support the launch of Snapchat for Web.
- Worked with Google to create an isolated, secure version of the SDK to support privacy requirements for Pixel's "Tap to Snap".
- Implemented category-based engagement metric tracking in SDK and reporting pipeline (BigQuery), increasing granularity of business reporting of time spent across components of the app.

Amazon | Amazon Go

Senior Software Engineer

Seattle, WA

Mar 2016 - Jun 2019

- Led the infrastructure team. Designed, evangelized for, and helped implement the architecture that enabled Amazon Go to scale reliably beyond its initial proof-of-concept store.
- Built Ruby SDK and Kotlin runtime tools to enable teams to deploy infrastructure-as-code based on a "cell architecture" paradigm, reducing blast radius of individual failures.
- Created "Health Check" microservice which probes Amazon Go's backend infrastructure for faults.

Amazon | Amazon Video

Senior Software Engineer

Seattle, WA & London, UK

Jan 2012 - Mar 2016

- Implemented FairPlay/HLS DRM, translating Apple's reference C code into Java, enabling HD video on Apple devices. Rewrote Amazon's digital rights ecosystem for DRM multi-tenancy.
- Technical lead for "Channels" - allowing customers to sign up for third-party subscriptions like HBO & Showtime inside Amazon Video - worked across multiple teams to get systems ready. Created a Java microservice to dynamically generate the content for users' homescreens.
- Created EU-compliant parental control system (Java microservice) and developed billing/subscription migration system (Perl and Java) to onboard UK subsidiary LOVEFiLM to the Amazon Video platform.

Heart Internet Ltd

Software Administrator/Developer

Nottingham, UK

Jun 2008 - Jul 2009 (one-year internship), Jun 2011 - Jan 2012

- Designed and developed VPS (Virtual Private Server) platform, also adopted by sister company, 123-Reg. Full stack development based on Perl and Javascript.
- Internship: Created a cPanel deployment automation system (Perl) that saved many hours of second-line support time. Designed/implemented a tape-storage backup solution using Amanda. Day-to-day maintenance and build of servers, managing mail queues and monitoring server security.

EDUCATION

University of Nottingham

BSc (Hons) Computer Science, 1st Class

Nottingham, UK

Sep 2006 - Jun 2010

Final year dissertation: developed enhanced "context-sensitive" word prediction on the Android utilising a corpus of medical texts (NHS Direct phone transcripts).

ADDITIONAL SKILLS/INFO

Programming Languages:	Java, Kotlin (Android + JVM), Typescript, Javascript, Dart, Python, Ruby
Frameworks:	gRPC/Protobuf, Android SDK, Spring, React, Tailwind, Flutter
Cloud:	AWS (including DynamoDB, S3, Cloudfront, EC2/ECS/Fargate, Lambda, Cloudformation/CDK, Amplify and others), Google (BigQuery, Firebase), SOA
Other skills:	Git, Linux, macOS. Great at learning new technologies!
Interests:	Animals (cat foster), Drone photography, Mobile/web-app side-projects, Running, Travel