

# RIK BROWN

Brooklyn, NY · +1 (206) 519-8684

[rik@rikbrown.co.uk](mailto:rik@rikbrown.co.uk) · [rikbrown.co.uk](http://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 low latency, loss and delay 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/GCE). Ran extensive A/B validation and performance testing to validate results and understand telemetry shifts.
- 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, evangelised for, and helped implement "cell architecture" - reducing blast radius of individual zone failures - across 100s of microservices, enabling 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.
- Created "Health Check" Kotlin microservice which probed backend infrastructure for faults.

### Amazon | Amazon Video

*Senior Software Engineer*

Seattle, WA & London, UK

Jan 2012 - Mar 2016

- Implemented FairPlay/HLS DRM in Java based on Apple's reference specification, enabling HD video on Apple devices. Rewrote Amazon's digital rights ecosystem to support multi-tenancy of DRM systems.
- Led a cross-org team for the "Channels" project - allowing customers to sign up for third-party subscriptions like HBO & Showtime inside Amazon Video. Worked across multiple Video and non-Video teams. Created a Java microservice to dynamically generate the content for users' home screens.
- Owned creation of a EU-compliant parental control system (Java microservice) and the billing/subscription migration system (Perl and Java) to migrate UK subsidiary LOVEFiLM.

### Heart Internet Ltd

*Software Administrator/Developer*

Nottingham, UK

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

- Designed and developed Virtual Private Server platform, later adapting it for whitelabel resale and adoption 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 and implemented their first disaster recovery system based on a tape-storage backup solution using OSS tooling including Amanda.

## EDUCATION

---

### University of Nottingham

BSc (Hons) Computer Science, First 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

---

Languages: Java, Kotlin (Android/JVM), Typescript, Javascript, Dart, Python, Ruby  
Frameworks: gRPC/Protobuf, Android SDK, Spring, React, Tailwind, Flutter, Node.js  
Cloud: AWS (inc. DynamoDB, S3, Cloudfront, EC2/ECS/Fargate, Lambda, Cloudformation/CDK, Amplify and others), Google (BigQuery, Firebase), Kubernetes/Docker  
Interests: Animals (my own + fostering cats), Drone photography, Running, Travel.  
Current side project - "Stacks Learning" - consumer ed-tech web app (React/TS), teaching kids real coding through daily rote learning. Contact to demo!