

# BO BRAMER

@bramer.bo@gmail.com

bo-bramer

bo-bramer.com

wuguishifu

## WORK EXPERIENCE

### Panyon, Co.

Seattle, WA

Senior Software Engineer

March 2024 - Present

- Built cross-platform mobile app using React Native (Expo), Kotlin, Swift, Objective-C++, OpenGL ES (and GLSL), and C.
- Developed native modules to record live PPG (photoplethysmography) data with medical-grade accuracy using the camera.
- Optimized real-time camera frame processors to achieve speeds of up to 180 hz (5.6 ms per frame).
- Designed and implemented signal processing libraries for Android and iOS to handle raw PPG data.
- Created an efficient peak detection algorithm for PPG data with a >99.9% detection rate and <1% false positive rate.
- Collaborated with medical doctors to develop algorithms that extract biomarkers and health metrics from PPG data.
- Utilized Google Firebase and AWS to build an event-driven, serverless backend with Lambda, S3, DynamoDB, and API Gateway.

### iBored

Irvine, CA

Senior Software Engineer

June 2022 - December 2023

Software Engineer

June 2021 - June 2022

- Designed and developed a cross-platform mobile app using React Native (Expo), leveraging TypeScript, Swift, and Kotlin.
- Built and maintained 25+ RESTful and event-driven microservices using Node.js and Java Spring.
- Optimized resource-heavy API endpoints to support 20,000+ TPS with an average response time of 175 ms.
- Engineered a high-performance real-time chat system with minimal latency using AWS API Gateway and Lambda.
- Automated unit, integration, and end-to-end testing for API and mobile app using Grafana k6, Postman, and Detox.
- Optimized caching and content delivery for AWS S3 resources using Route53 and CloudFront distributions.
- Managed the CI/CD pipeline and AWS deployment with AWS CloudFormation/CDK and Expo Updates.

### ChemTalk

Thousand Oaks, CA

Co-Founder

December 2020 - January 2024

- Increased traffic by 75% year-over-year by optimizing caching, reducing CDN latency, and improving First Contentful Paint time.
- Developed multiple websites and cross-platform mobile applications using Next.js, React, and React Native (Expo).
- Managed a team of 55+ employees and interns and collaborated with internal and external hiring teams.
- Led large-scale cross-functional projects, including a full website rebuild, coordinating efforts across multiple teams.
- Built internal automation tools to efficiency across various departments within the organization.

## PROJECTS

### Cloud Safe

Los Gatos, CA

Cloud Storage Encryption Application

October 2023 - February 2024

- Developed a cross-platform desktop app using Rust and TypeScript enabling users to manage files in AWS S3 or Google Drive.
- Built a modern web application with Next.js, leveraging TypeScript, Tailwind CSS, and shadcn/ui.
- Integrated Tauri to run Next.js application in a desktop environment supporting multiple platforms.
- Developed Rust-based backend within Tauri to handle file encryption, decryption, and secure upload/download for users.

### Boba Tracker

Irvine, CA

Boba Rating/Sharing Mobile Application

March 2023 - June 2023

- Developed a React Native (Expo) app for users to rate, track, and share their Boba orders with friends.
- Implemented Google Firebase for authentication and an event-driven, serverless backend using AWS.
- Designed an analytics system utilizing Neo4j to analyze drink order patterns and recommend new drinks to users.
- Created native modules using Kotlin and Swift enabling the use of the camera to analyze and extract data from order receipts.

## TECHNICAL SKILLS

- TypeScript, React Native, Expo, Kotlin, Swift, Python, Java, Objective-C/C++, MATLAB, GLSL, Next.js, React, JavaScript
- System and Database Design, MongoDB, Neo4J, Docker, AWS, Google Firebase, Docker, Linux

## EDUCATION

### Bachelor of Science

University of California, Irvine

- **Major:** Chemical Engineering; **Specialization:** Biomolecular Engineering
- **Relevant Coursework:** Algorithms & Data Structures, Numerical Methods, Linear Algebra, Differential Equations (ODE and PDE), Vector Calculus