

Ryan Dern

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EDUCATION

UNIVERSITY OF MASSACHUSETTS BOSTON

B.S. IN COMPUTER SCIENCE

May 2021 | Boston, MA

Visual Attention Lab,
Artificial Intelligence Association

SKILLS

Languages:

Java • TypeScript/JavaScript • C++

Python • C# • HTML/CSS

Frameworks & APIs:

Node • Angular • React • React Native

Electron • WebGL

Databases:

SQL • NoSQL • RDS • PostgreSQL

DynamoDB • Elasticsearch

Cloud:

AWS • Lambda • ECS • EC2 • CDK

CloudWatch • SageMaker • Fargate

Tools:

Git • Bash • Docker • Visual Studio

IntelliJ • JIRA • Unity

Etc:

REST APIs • Distributed Systems • AI

Machine Learning • DevOps • UX

SIDE PROJECTS

DEEPHEALTH ANNOTATE

Built an Angular web app that radiologists and researchers are using to annotate DICOM medical images and export annotation metadata for training deep learning models. Mentored five other developers as team lead, organized standups and milestones, led design and implementation.

GOOGLE J-TERM

Completed a January course focused on data structures, algorithms, and Android app development at Google's Cambridge, MA office. Worked with a small team of students to develop a final project for the Android platform and presented our work to other students and Googlers in attendance.

EXPERIENCE

AMAZON | SOFTWARE DEVELOPMENT ENGINEER

February 2022 - January 2023 | Boston, MA

- Designed, developed, and deployed new features to support Ambient Intelligence initiatives for Alexa Smart Home devices.
- Designed and developed a new system (Java/Lambda/DynamoDB) to automate the provisioning and configuration of test account pools and simulated devices, successfully lowering the team's operational burden by eliminating issues caused by device staleness.
- Built frontend components for the Alexa mobile app (TypeScript/React Native) to support new intelligent Setup Hunches, which allow users to easily optimize their smart home appliances for more natural interactions. This successfully increased Setup Hunch API traffic by 100%.
- Launched Setup Hunch features worldwide. Implemented localization for different locales. Performed load testing and worked across teams to determine monitoring, throttling, and other operational configuration to ensure a smooth rollout.

AMAZON WEB SERVICES | SOFTWARE DEVELOPMENT ENGINEER

June 2021 - February 2022 | Boston, MA

- Mapped error code behavior translations for Babelfish for Aurora PostgreSQL, a translation layer that allows SQL Server users to migrate their applications to Aurora PostgreSQL with minimal code changes.
- Added a query generator to the Babelfish build and release pipeline to perform fuzz testing of SQL queries, improving test coverage by ensuring unusual queries would not raise unexpected error conditions when performing translation between database engines.

AMAZON WEB SERVICES | SOFTWARE DEV ENGINEER INTERN

June 2020 - August 2020 | Boston, MA

- Initial design and development of serverless continuous integration pipelines using Docker, Python, AWS Fargate, CodeCommit, and CloudWatch.
- Built automated data pipelines and dashboards to view product metrics with Elasticsearch and Grafana.

FIDELITY INVESTMENTS | SOFTWARE ENGINEERING INTERN

June 2019 - August 2019 | Boston, MA

- Led a new data visualization dashboard page through analysis, design, and development that provides users with quick access to statistical trading information as part of the Order Routing UI web application (Angular/TypeScript) used by Fidelity Capital Markets.

UMASS BOSTON VISUAL ATTENTION LAB | RESEARCH ASSISTANT

March 2019 - August 2019 | Boston, MA

- Developed a visual feedback application that interfaces with SR Research eye-tracking hardware using JavaScript, Electron, and WebGL, intended as an exercise to improve conditions for people with amblyopia (lazy eye), strabismus (crossed eyes), and ADHD.

RIBBON COMMUNICATIONS | SOFTWARE ENGINEERING INTERN

November 2017 - January 2018 | Westford, MA

- Refactored C and C++ code to ensure platform tools used in embedded operating systems for session border controllers were compliant with security and performance standards.