Brooke K. Ryan

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EDUCATION

University of California, Irvine — Irvine, CA
M.S. in Computer Science — 2020–Current
- Relevant coursework: Artificial Intelligence, Analysis of Programming Languages, research seminar

University of California, San Diego — La Jolla, CA
B.S. in Mathematics-Computer Science — 2013–2017
- Relevant coursework: Statistics, Linear Algebra, Advanced Data Structures

RESEARCH INTERESTS

Artificial Intelligence • Machine Learning • Neural Networks • Deep Learning • Data Science • Cognitive Science • Programming Languages • Software Engineering • Human-Computer Interaction

EXPERIENCE

Blizzard Entertainment — Irvine, CA
Associate Software Engineer — January 2020 - Current
- Backend Java engineer in the Battle.net and Online Products organization, delivering eCommerce APIs and capabilities on the Purchase team; additionally working in SQL and relational databases.
- Altered critical Purchase-system APIs to implement functionality to support several new payment methods and platforms in Korea region; co-presented an organization-wide talk on the project and methodologies used.
- Founder and facilitator of tri-weekly organization-wide book club to promote knowledge and application of theoretical knowledge to eCommerce systems; topics include Relational Databases, SQL Querying, Splunk.

Intuit — San Diego, CA
Software Engineer I — August 2017 - November 2018
- Backend Java engineer; delivered Identity capabilities across Intuit products.
- Created Spring "Annotator" tool, automatically converts any Spring XML project to equivalent annotation configuration. Increases unit test speed 12x, provides business savings in reducing server runtime during test build. Gave organization-wide tech talk; open-sourcing for over 10,000 Intuit employees.
- Implemented Lastmile security checkpoint for AWS migration; tested using Undertow server container, 120x quicker technique than deploying to Tomcat.
- Delivered bulk API nearly 2 months prior to customer production deadline with additional query parameters for filtering. Significant speedup in batch retrieval for QuickBooks.
- Led Identity team to improve speed and stability of CICD test and build cycle. Researched strategies to address infrastructure issues, implemented automated build jobs for visibility on flaky tests. Decreased build by 1.5 hours.

Intuit — San Diego, CA
Software Engineering Intern — June 2016 - September 2016
- Intern on iOS TurboTax application team, focus in Java and React Native.
- Implemented Java HipTest integration project for TurboTax mobile front-end QE team. Improved visibility of manual tests by implementing interface for test data. Reduced time in manual testing by 20; saved team >40hr/ release.

CBS Interactive   San Francisco, CA
Software Engineering Intern   June 2015 - August 2015

- Front-end software engineering intern on the Advanced Technology Team.
- Implemented several key features on the Content Management System JavaScript framework, increased efficiency by utilizing AJAX and MVC design.
- Awarded 1st place in company-wide hackathon developing a feature for the Content Management System that allows CBS articles to be published directly from Twitter using Node.JS. Increases search engine optimization, article views, and ad revenue.

Teaching

- **Teaching Assistant** at University of California, Irvine   Fall 2020
  Project Management (Informatics 150)

  - Introduces concepts and principles of collaborative systems. Topics may include shared workspaces, group interaction, workflow, architectures, interaction between social and technical features of group work, and examples of collaborative systems used in real-world settings. Students develop a collaborative application.

- **Lead Instructor** for Girls Who Code   May 2019 - August 2019
  Summer Immersion Program

  - 7-week program for 10th-11th grade girls, teaching computer science fundamentals using Scratch, Python, Arduino, C, JavaScript, CSS, and HMTL with the goal of increasing representation of women pursuing STEM careers.
  - Implemented original curriculum in order to facilitate further understanding and engagement in advanced topics such as Git, command line, and Python source code.
  - Mentored and managed 20 students and an undergraduate assistant instructor.
  - Rated highest-performing teaching team in the Southern California region.

- **Undergraduate Project Advisor** at University of California, San Diego   September 2015 - June 2017
  Design for Development (ENG 100D)

  - Taught and advised interdisciplinary teams (approx. 150 students per quarter) collaborating with nonprofit orgs to design technology-based solutions to social and environmental problems.
  - Advised K-12 STEM education program. Led visits to local schools to engage children in STEM-related topics taught by UCSD engineers with the goal of increasing representation of people of color and women pursuing higher education in STEM.

Scholarships and Awards

- UC Irvine Teaching Assistantship   2020 –Current
- 1st Place, CBS Interactive Company-Wide Summer Hackathon   Summer 2016
- Provost Honors, UC San Diego   Awarded four times between 2013 –2017

Skills

- **Languages:** Java, Kotlin, Python, JavaScript, HTML, CSS, SQL, C++

- **Tools, Techniques, and Frameworks:** Functional programming, software design, object-oriented programming, REST APIs, code generation, Git, backend software engineering, front-end software engineering, quality engineering, human-centered design, Arduino, Raspberry Pi, React Native, Node.js

Extracurricular Activities

- Global Ties September 2015 –June 2017
  Social Media Manager
  TA Interview Committee

- UC San Diego Club Swim Team May 2014 –June 2017
  Co-Founder and Officer

- Thurgood Marshall College, Marshallpalooza Committee Fall 2013
  Entertainment Committee Lead