Erik Hoberg

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EDUCATION

University of Washington   Seattle, Washington

M.S. Computer Science   *Expected: Jan. 2019 - Jun. 2020*

B.S. Computer Science: Data Science, GPA: 3.9   *Aug. 2015 - Dec. 2018*

- Relevant coursework includes Distributed Systems, Database Internals, Machine Learning, Operating Systems, Security, Algorithms, Data Visualization

EXPERIENCE

Amazon   New York, New York

Software Engineering Intern   *Jun. 2018 - Sep. 2018*

- Developed a tool used by an advertising team that generates and publishes debugging trace information for an ad as it moves through six targeted ad systems
- Asynchronously intercepted and stored ad information in each system in a DynamoDB + S3 instance and used NodeJS and express to build a frontend for displaying information
- Integrated with a tool used by an advertising team in Seattle, coordinating with them on how to best create a tool that can be extended eventually to other advertising teams at Amazon
- Reduced the time taken by developers to retrieve needed debug information from anywhere from 1-3 hours to seconds by aggregating information in key systems in one place and exposing a link to this directly on the Amazon search page

University of Washington   Seattle, Washington

Undergraduate Teaching Assistant   *Oct. 2016 - Present*

- Leader of weekly class sections consiting of about 20 students in the data structures and introductory programming courses
- Topics focused on data structures (trees, linked lists, sets, hash tables, heaps, graphs) and fundamental programming concepts (iteration, conditionals, recursion, inheritance, testing, sorting, asymptotic analysis)
- Code reviewed and provided detailed feedback on hundreds of thousands of lines of code and developed criteria focused on equipping students with strong foundations and industry-standard techniques

Head Undergraduate Teaching Assistant   *Jun. 2017 - Sep. 2017*

- Leader and facilitator of weekly TA discussion group focused on collaboration and strategic thinking for teaching success consisting of approximately 10 other TAs
- Curated and presented problems used by all TAs in section and contributed to course resources used in following quarters

PROJECTS

Visualization of Sequence Alignment with Dynamic Programming

- Project link: https://hoberg.github.io/Smith-Waterman/
- Worked with a team of four to explore an algorithm we were curious about, using an interplay of text and visualization to reveal insights into the details of the algorithm
- Used Javascript, D3, and Idyll to build custom interactive components
- Featured on the Idyll Example Gallery: https://idyll-lang.org/gallery/

SimpleDb Database System

- Built a database system capable of servicing basic SQL queries
- Implemented a page-level locking mechanism and components that allowed for the system to run multiple transactions in parallel on multiple machines
- Used a log to provide crash-safety at any point in execution of a transaction

QUALIFICATIONS

- Proficient in Java, Python
- Comfortable working with C, C++, Javascript, SQL, Ruby