

Jacob Nishimura

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Education

M.S. Electrical & Computer Engineering

University of Iowa

Fall 2020 - Spring 2021

Iowa City, IA

B.S. Electrical Engineering

B.A. Music

University of Iowa

Fall 2016 - Spring 2020

GPA: 4.05/4.00

Iowa City, IA

Work Experience

Software Development Engineer Intern

Amazon.com

May 2020 – August 2020

Remote Internship

- Designed and built a data processing pipeline for generating music recommendations using Apache Spark on AWS Elastic Map Reduce (EMR) and AWS Data Pipeline to process 200-300 GB of raw customer music streaming data on a daily basis and write the results to DynamoDB for quick access.
- Created API with AWS Lambda and AWS API Gateway to surface results from the DynamoDB table.
- Integrated API with other teams' back-end services to mix and deliver personalized and curated content to customers.
- Secured sensitive data by using tools like AWS Virtual Private Cloud (VPC) and AWS Identity and Access Management (IAM) to isolate resources from the public internet

Software Development Engineer Intern

Amazon.com

May 2019 – August 2019

Seattle, WA

- Designed and implemented service (Java) to query for top-selling products, retrieve relevant product attributes (e.g. name, price, description), and display products to the customer on team's store page.
- Researched latency issues in project and implemented pagination of product results, decreasing p90 latency by ~75%.
- Collaborated with UX designer and project manager to perform A/B testing of feature for customers.
- Created continuous integration/continuous deployment pipeline to test and deploy changes to production.

Research Assistant

Holo Reality Lab

January 2019 – Present

Iowa City, IA

- Researching techniques on encoding 3D geometry in 2D images (MATLAB) to improve trade-offs between file size and error.

Teaching Assistant

Linear Systems

January 2019 – May 2019

Iowa City, IA

- Taught discussion section, held office hours, and graded for 30+ students weekly.

Research Assistant

Center for Bioinformatics and Computational Biology

May 2016 – November 2017

Iowa City, IA

- Developed Java algorithms to generate statistics on clubfoot patient data from SQL database of 100,000s of records.
 - Designed and improved user interfaces for both a web portal (HTML, CSS, Bootstrap) and desktop application (JavaFX, CSS) to improve user experience.
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Skills

Programming/Scripting Languages: Java, C++, Scala, Python, MATLAB, SQL

Frameworks and Tools: Apache Spark, OpenCV, Spring MVC, Google Guice, JUnit, Mockito, Git

Cloud Services: AWS (EC2, Lambda, DynamoDB, S3, IoT, VPC, CloudFormation, EMR), Google Firebase