# **Daniel Thurau**

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# WORK EXPERIENCE

Amazon - Software Developer Engineer II

Oct 2018 - June 2021

- Amazon F3: Built microservices for post-order fulfillment orchestration to support grocery delivery products on Amazon.com. Improved order cancellation web services to reduce the number of stuck Amazon Fresh orders by 5%.
- Alexa Mobile Personalization: Created a Ranking as a Service (RaaS) web service that deployed machine learning models for channel owners across the Alexa Mobile Org. Developed a data pipeline using AWS Kinesis Streams, AWS Lambdas, AWS DynamoDb, and AWS S3. Integrated A/B testing frameworks into the RaaS to run experiments to improve metrics such as CTR and DSI.
- Alexa Mobile Home Channel: Built and maintained Java REST microservices using AWS infrastructure, including a content
  aggregator platform for domains across Alexa. Developed a CMS for product managers to easily create static content. Created
  Privacy Compliance applications that satisfied GDPR, COPPA, and CCPA laws. Lead efforts in chaos and load testing against
  backend services.

# Learning & Experimental Economics Projects Lab - UC Santa Cruz - Developer

**Apr 2017 – Aug 2018** 

- Simulated how players could behave during open market experiments by allowing professors to write processable player choices using the Gherkin Syntax Language and transforming those choices into programmable actions in the software market.
- Developed a test harness using simulated players to QA each software release and analyze simulated stock markets for department research projects.
- Contributed to a branch of Redwood, an open-source project for coordinating distributed players in a simulated market written in JavaScript.

### NBCUniversal - Security Analyst & Developer Intern

June 2017 – Sept 2017

- Created and published a python library utilizing OOP concepts to create a scalable scanning utility to verify security subsystems for NBCUs corporate and production networks.
- Configured, deployed, and managed production Linux servers to host internal and external applications.
- Implemented a real time notification system for NBCUs Information Security Group when vulnerabilities were detected.

#### **PROJECTS**

Personal Website May 2021

- Developed my personal website using the GatsbyJS framework, a React JS framework for static sites.
- Hosted via Gatsby Cloud with a CI/CD deployment pipeline from its Github source.

<u>ColorSplash</u> Jun 2021 - Oct 2021

- Developed a web application from scratch that allows users to browse royalty free images that have colors within a certain Euclidean distance of a provided HEX code.
- Implemented the data processing component with AWS Lambda using python open-cv2 for image processing and NodeJS for scraping the dataset.
- Built the website's backend with API Gateway and AWS Lambda to ballpoint query a KDTree data structure. Constructed the front end with GatsbyJS and hosted via Gatsby Cloud.

Smudge Art Box Jun 2021 - Present

- Assisted the founding of an ecommerce business selling curated ready-made art supply kits with an emphasis on mental health that turned a profit within its first quarter.
- Owned financial vertical including bookkeeping, taxes, invoices, and pricing.
- Helped source inventory during the product design phase and provided feedback on key product decisions.

#### **EDUCATION**

## University of California: Santa Cruz

Sept. 2014 - June 2018

Bachelor of Science, Computer Science: GPA 3.3

Santa Cruz, CA

## **SKILLS**

Java, Python, Bash, Javascript, React, C/C++, SQL, NoSql, Latex, HTML/CSS; AWS Lambda, AWS EC2, AWS DynamoDB, Spring Boot/Dagger, Django, Juypter, GatsbyJS;