Ethan Burrell

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Education

UC Berkeley **May 2021**
Electrical Engineering and Computer Science B.S. *Berkeley, CA*

Skills

Full Stack Web Engineering
- HTML, CSS, Javascript, React
- PHP, SQL, Node.js, MongoDB
- REST API Design, GraphQL
- Architecture of web applications

Python, C, Java, Git(version control)
Signal Processing
Machine Learning / Data Science
- Pandas / Data Cleaning
- Scikit learn

Amazon Web Services (AWS)
- Lambda / EC2 / Docker
- DynamoDB / RDS
- API Gateway / CloudFront
- CloudFormation Templates

Relevant Experience

Credit Karma **May 2020 – August 2020**
Software Engineering Intern *San Francisco, CA*
- Worked as a part of Agile product engineering team to develop 12 features for Credit Karma Savings.
- Collaborated with team and Project Managers to boost conversion through signup flows from 28% to 54%.
- Developed features to reduce member support cases from 3% to 1% saving Credit Karma over $14,000 yearly.
- Contributed to micro-services across organization using Typescript and Scala to develop React and backend services.
- Verified releases with Quality Engineering for cross-device support and performance profiling of new features.

Autodesk **May 2019 – August 2019**
AI Engineering Intern *San Francisco, CA*
- Collaborated to build and release DesignNet, internal repository for Machine Learning Dataset distribution.
- Developed React site, later deployed on a S3 Bucket website with CloudFront distribution (CDN).
- Built data pipeline that ingests and tags files with metadata and stores data in Apache Parquet files (open source columnar storage database) in S3.
- Initiated user research to develop business processes for ingest pipeline and use cases of data platform.
- Utilized AWS services including Lambda, API Gateway, Step Functions, and Athena to create a highly scalable and serverless application for Autodesk Research, reducing system budget to under $10 a day.

Center for Community Innovation **May 2018 – Present**
Data Science Research Assistant *Berkeley, CA*
- Worked under Professor Karen Chapple studying the displacement of low-income groups from the Bay Area and the effects of gentrification.
- Built interactive web maps to show the displacement typologies of the Bay Area using JavaScript / Leaflet.js.
- Introduced pipeline to automate creation of custom maps. Reduced development time by weeks.
- Designed classifier to predict gentrification in San Francisco and New York. Preprocessed data by cleaning, and normalization. Predicted gentrification 10 years into the future with ~80% accuracy.

Robotics @ Berkeley (Student Organization) **January 2019 – May 2020**
Team Lead *Berkeley, CA*
- Influenced club recruiting and programs that increased semesterly student return rate from 20% to 60% by initiating advanced programs. Participated in weekly club leadership meetings.
- Supervised a team of 6 to develop on fork of self-driving car simulator in Unity.
- Adding better driving dynamics to simulator, as well as methods for inputs from Reinforcement Learning algorithm.

Intro to Data Science (INFO 298) **January 2019 – December 2019**
Teaching Assistant (TA) *Berkeley, CA*
- Evaluated pilot class for non STEM grad students. Taught data science material focused on introduction to Python, statistics, inferential thinking, and problem solving techniques.
- Lead a section of 30 students in a flipped classroom. Supported students with mini-lectures on Pandas Dataframes and sampling. Held additional office hours to boost confidence in Python skills.

Projects

Rent and Demographic Change Maps *Center for Community Innovation*
- Built maps powered by Census data to show the change of the greater Bay Area demographics over time.
- Published in the SF Chronicle (Housing prices are resegregating the Bay Area, UC Berkeley study finds)