

David Hacker

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EDUCATION

2017 – 2021 **Computer Science**
BACHELOR OF SCIENCE, 4.0
UC San Diego

WORK EXPERIENCE

JUNE 2017 – SEPT 2017

Application Developer @ MyGolfFaves

React Native, Expo XDE

- Created iOS and Android apps for MyGolfFaves, a golfing discounts company
- Coordinated production of the backend API routes to link with the frontend

JULY 2016 – JAN 2017

Full Stack Developer @ Blinks

MEAN stack, Materialize, Amazon S3, Heroku

- Added multi-threading to Blink's Android app to improve performance
- Created a backend for Blink's iOS sticker subscription service using Heroku, mLab, and Amazon S3
- Designed a corresponding admin panel using Materialize

MAR 2016 – AUG 2016

Full Stack Developer @ IndieU

MEAN stack, Bootstrap, Amazon EC2

- Redesigned the website for IndieU, driving nearly 20% more traffic to the site
- Improved IndieU's music streamer by optimizing song file delivery
- Oversaw the two Amazon EC2 instances running IndieU's platform

HONORS & AWARDS

APR 2017 **1st Place:** Startup Weekend Conejo Valley 2017
MAR 2017 **Honorable Mention:** SIAM M3 Challenge (top 8% of teams)
JAN 2016 **3rd Place:** MIT Zero Robotics 2015

PROJECTS

FALL 2017

Product Review Rater

Python, Gensim, Keras, Flask

- Developed machine learning algorithm to convert product reviews to ratings on a scale from 0 to 5
- Trained 2 deep neural networks to learn semantic relationships between words
- Webscraped millions of Amazon reviews as training data for the networks

SUMMER 2017

Alexa YouTube Skill

NodeJS, AWS Lambda, Heroku, FFmpeg

- Created a skill that lets Amazon Alexa devices play audio from YouTube videos
- Downloaded over 200 times
- Reviewed by the German tech channel Venix, which has over 10,000 subscribers

SUMMER 2016

Text Compression Experiments

Python

- Developed custom compression algorithm combining existing designs
- Outperformed standard zlib compression in over 50% of input texts
- Implemented the Weismann score efficiency metric for determining strength of the compression algorithm

SPRING 2016

Photorealistic Rendering Engine

Java, Swing

- Created ray tracer that can show light refraction and reflection
- Detected ray-object collisions quickly using a k-d tree structure
- Ran several threads in parallel to speed up image generation

SOFTWARE SKILLS

LANGUAGES Java, Python, JavaScript, C++, HTML, CSS, SQL, \LaTeX

FRAMEWORKS MEAN stack, Flask, Firebase, React Native, Materialize, Bootstrap