David Hacker

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Education

- **University of California San Diego** — **La Jolla**
  B.S. Computer Science, 4.0 — *2017–2021*

Work Experience

Positions Held

- **Medspace** — **La Jolla**
  Software Engineering Intern — *Oct 2017–Present*
  - Developed a tester application using Xamarin Forms that tracked team member locations
  - Designed a patient-to-nurse matching algorithm that helped secure funding for the company
  - Worked in an Agile development environment to implement my algorithm in a .NET core backend
- **Blinks** — **Westlake Village**
  Full Stack Developer — *Aug 2016–Jan 2017*
  - Added multi-threading to Blink's Android app to improve performance when tracking Eddystone beacons
  - Created a backend for Blink's iOS sticker subscription service using Heroku, mLab, and Amazon S3
  - Designed a corresponding admin panel using Materialize so that artists could add stickers to the site
- **IndieU** — **Westlake Village**
  Full Stack Developer — *Mar 2016–Aug 2016*
  - Redesigned IndieU's website and improved site SEO, driving traffic up by nearly 20%
  - Improved their music streamer by optimizing song file delivery
  - Fixed issues with their onboarding process, allowing users to save their profile and enter information later

Notable Projects

- **Data Analytics for The Triton:** *Python, Flask, Bokeh, Pandas, Heroku*
  - Spearheaded the analytics platform for The Triton newspaper
  - Helped editors & writers evaluate their performance by displaying readership metrics in a clean, understandable manner
  - Determined ideal content types, headline formats, and times to post articles using machine learning
- **Product Review Rater:** *Python, Gensim, Keras, Flask*
  - Developed machine learning algorithm to convert product reviews to ratings on a scale from 0 to 5
  - Webscraped millions of Amazon reviews as training data for the algorithm
- **Alexa YouTube Skill:** *NodeJS, AWS Lambda, Heroku, FFmpeg*
  - Created a skill that lets Amazon Alexa devices play audio from YouTube videos
  - Downloaded over 500 times and has over 40 stars on GitHub
  - Reviewed by the German tech channel Venix, which has over 10,000 subscribers
- **Photorealistic Rendering Engine:** *Java, Swing*
  - Created a ray tracer that can show light refraction and reflection
  - Detected ray-object collisions quickly using a k-dimensional tree structure
  - Ran several threads in parallel to to speed up image generation

Technical Skills

- **Languages:** Java, Python, JavaScript, C++, C#, SQL, LaTeX
- **Frameworks:** MEAN stack, Flask, Firebase, React Native, Xamarin, Materialize, Three.js