

# RITIK RAINA

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## 🏛️ EDUCATION

**University of California, San Diego**

*B.S. Cognitive Science: Specialization in Machine Learning and Neural Computation*

September 2018 - June 2022

Major GPA: 3.4

## 📖 RELEVANT COURSEWORK

Data Science in Practice  
Data Structures & OO Design  
Discrete Mathematics

Software Tools and Techniques  
Computer Organization & Systems Programs  
Neural Networks and Deep Learning

## 💻 SKILLS

**Languages** Java, Python, Swift, React.js, HTML, CSS, C++, LaTeX, Bash, Assembly

**Software & Tools** UNIX, Git, Vim, Jupyter, MongoDB, CocoaPods, Google Firebase, OpenCV, Tensorflow

## </> EXPERIENCE

**CodePath** | Tech Fellow

January 2020 - Present

**Worked with:** Xcode 11, Swift, CocoaPods,

- Increased the largest pipeline of high-performing underrepresented engineers in tech via Codepath, a nonprofit that has raised \$1 million from Facebook.
- Taught Facebook-designed 12-week iOS course to campus teaching 45+ students the fundamentals of app development through the hands-on experience.
- As an instructor, I was required to maintain a high-level of understanding of the curriculum topics including but not limited to: Frameworks, iOS Libraries, Back-end, APIs, AutoLayout (constraints), and CocoaPods.

**STAR Capital** | Machine Learning Intern

July 2019 - September 2019

**Worked with:** Python, Tensorflow, OpenCV, Dlib C++, Firebase, SciPy, NumPy, Pandas, Keras

- Developed Python scripts which used Selenium, Request, and BeautifulSoup frameworks for evaluating web-scraping models. These models were then used to scrape credit rating documents off FinTech sites.
- Researched and developed CNN/Spatial models for training and evaluating facial detection & recognition systems based on employee facial data.
- Designed and implemented custom spatial algorithms and data structures for deriving facial landmarks.

**VennPool** | Software Engineer

November 2018 - April 2019

**Worked with:** HTML/CSS/JavaScript, Bootstrap, Firebase, Expo, React

- Designed and developed the company website's interface using Bootstrap themes and CSS/Semantic UI.
- Communicated with mentors and investors as a part of the startup incubator, The Basement.
- Worked with Google Firebase APIs to authorize access to the application and control service operation access.

## 📁 PROJECTS

**Invoice Logger**

January 2020

**Uses:** MongoDB, Express, HTML/CSS/JavaScript, React

- Built a reactive web application using MERN stack for querying banking transactions uploaded to a MongoDB collection. Built to explore the various features of MongoDB Atlas.

**Tweet4Me**

December 2019

**Uses:** Swift, Alamofire, Twitter REST API, UIKit, AFNetworking

- Custom Twitter app for browsing and interacting with a personalized feed.
- Implements the Twitter RESTful API to supply feed with tweets and allow users to tweet, retweet, and favorite.

**ParsyGram**

December 2019

**Uses:** Swift, Parse, Alamofire, UIKit

- An Instagram-style social media application where users can create accounts to upload and share pictures.
- Utilizes a custom Parse backend to securely store users and passwords.

**Awakened: Eye Predictor for User Vehicle Safety**

October 2019

**Uses:** Python, SciPy Spatial, Dlib, iMutils

- A Python/Django application which could monitor the eyes of a driver. If the driver's eyes were closed for  $\geq 2$  seconds, an alert would buzz to wake the driver. After each vehicle trip, an online report would be made to measure the total time the driver was unconscious for. This was a group project built at the 2019 MLH SDHacks.

**Snake: OpenGL**

December 2019

**Uses:** C++, OpenGL

- A C++ 2D clone application of the classic game, Snake. Keyboard clicks help the user navigate across the board. As the snake intakes food, its speed FPS increases. Created the 2D environment by using texture mapping.