

# Lulu Ricketts

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## EDUCATION

### University of California, San Diego

La Jolla, CA

(Sept. 2018 — June 2021)

*Bachelor of Science in Cognitive Science, with Specialization in Machine Learning*

*Minor in Computer Science*

- **GPA: 3.72**
- *Relevant Coursework: Object-Oriented Programming with Java, Discrete Mathematics, Data Science in Practice, Basic Data Structures and OO Design (Java/C/C++), Software Techniques and Tools Lab, Vector Calculus, Probability and Statistics, Advanced Data Structures, Computer Organization and Systems Programming, Neural Signal Processing, Intro to Machine Learning I, Linear Algebra*

## CERTIFICATIONS

### IBM Data Science

Coursera "Professional Certificate"

(issued Sept. 2019)

### Deep Learning, deeplearning.ai

Coursera "Specialization"

(issued Sept. 2020)

## SKILLS

**Languages:** Python, Java, C/C++, HTML, CSS, Javascript

**Libraries/Tools:** PyTorch, Sk-learn, pandas, numpy, scipy; Bootstrap, ReactJS, NodeJS, Git, networkX, OpenCV, Semantic-UI

## PROFESSIONAL EXPERIENCE

### Data Science Research Assistant, UCSD Voytek Lab

La Jolla, CA

(Feb. 2020 — Present)

- Cleaned over 40,000 rows of behavioral data from cognitive game app Lumos
- Found the presence of a Flanker effect: that taking breaks in practice affects performance of a task
- Performed statistical t-tests, hypothesis tests, and goodness-of-fit measures for various features

### Research Intern, Qualcomm Institute

La Jolla, CA

(Sept. 2020 — Present)

- Researched strategies on how to approach complex data systems in a changing world
- Utilized LiDAR data and satellite imagery to begin composing a machine learning model to map tree canopies in San Diego

### Software Engineer Intern, Scripps Research Institute

La Jolla, CA (Remote)

(June 2020 — Sept. 2020)

- Implemented filters to condense and rank results returned by BiothingExplorer from over 800 to the top 50 most relevant
- Parsed NIH MRCOC tsv file (>250 million points) to create an API of the co-occurrences between any two biomedical concepts
- Utilized ReactJS to create a more responsive and user-friendly interface for the BiothingsExplorer website

## PROJECTS

### German Traffic Sign Recognition Benchmark

Github: "gtsrb\_winter"

(Oct. 2019 — May 2020)

- Built and trained a convolutional neural network to recognize and classify 43 classes of traffic sign images
- Applied transfer learning on ResNet18 to attain a testing accuracy of 85% and performed error analysis on our results
- Achieved final accuracy of 96% after implementing resampling, greyscaling, and affine transformation functions

### 2019 Mass Shootings and Violence Analysis

Github: "GunViolenceAnalysis"

(March 2020)

- Analyzed correlations between areas that experienced shootings, their incomes, and their top venues using K-means clustering
- Visualized geospatial data with folium using 2 kinds of clusters to determine which areas are more at risk of shootings

## LEADERSHIP

### Projects Manager, Data Science Student Society at UCSD

La Jolla, CA

(Sept. 2019 — Present)

- Worked closely with the Halicioglu Data Science Institute to plan 10 data science projects per quarter
- Communicated with local businesses about project collaborations for committee members projects

### Undergraduate Instructional Assistant, UCSD

La Jolla, CA

(Sept. 2020 — Present)

- Held office hours, answered questions, and graded assignments for Professor Eran Mukamel's Neural Signal Processing course