

# SHIVANSH RUSTAGI

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## EDUCATION

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### The University of California, Santa Cruz

Santa Cruz, CA

BS Computer Science / Statistics Minor *GPA: 3.86 / 4.00*

Sep 2018 - (Expected) Jun 2022

*Coursework:* Algorithms, Data Structures, Computer Architecture, Natural Language Processing, Machine Learning, Linear Algebra, Discrete Mathematics, Vector Calculus and Analytic Geometry, Ordinary Differential Equations, Probability Theory, Applied Bayesian Inference (Graduate)

*Activities:* UC Santa Cruz College Scholar, President @ Santa Cruz Artificial Intelligence, Co-founder + Director of Consulting @ 180 Degrees UCSC, UC Santa Cruz Muay Thai

## EXPERIENCE

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### Applied Machine Learning Lab @ UCSC

Santa Cruz, CA

*Researcher*

Jan 2020 - Present

- Working under Professor Narges Norouzi to apply natural language processing and deep learning to track emotional state for psychotherapy patients with various mental health disorders.
- Built benchmark dataset from over 2,500,000 Reddit posts to industry standards.
- Designed deep learning pipeline with pre-training task and sequence-to-sequence model, achieved SotA on mental health quantification task.

### Huddl.ai

Mountain View, CA

*Software Development Engineering Intern*

Jun 2020 - Present

- Optimized multi-party meeting scheduler pipeline in Go to reduce execution latency by 4x via parallelization, used daily by thousands of customers across 80 countries.
- Rewrote internal logging library (Go) to improve memory use, add rich configuration support, and support concurrency.

### ICURO

Santa Clara, CA

*Deep Learning and Embedded Systems Intern*

Jun 2019 - Sep 2019

- Designed automatic license plate recognition systems in Python, TensorFlow, and DarkNet (YOLO v3) to be used by client.
- Designed 8-bit-quantizable models with on-device offline inference to run on UNIX embedded systems, 10x smaller than standard model.
- Created end-to-end data pipeline + custom Python library to synthesize California license plate image data, including data obfuscation and transformation options.
- Tested model on randomly scraped dataset, achieved 96% accuracy.

## SKILLS

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Programming Languages: Python, Go, Java, C, JavaScript (ES6)

Tools/Frameworks: PyTorch, NumPy, Pandas, Spacy, NLTK, OpenCV, TensorFlow, TensorFlow Lite, Flask, HTML + CSS/SASS, Node.js, React.js, Firebase, MongoDB, Docker, Kubernetes, Unix, Git, REST

## PROJECTS

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### Dropp (Radar.io Sponsor Prize Winner) Python, Node.js, GCP, Radar.io

<https://devpost.com/software/dropp-c3tqix>

Created at CruzHacks 2020. Peer-to-peer solution for last mile shipping. Developed algorithm to efficiently generate random 'drivers' most aligned to highly traveled routes, integrated geofences into routing and delivery pipelines.

### SMLR Python (Flask, GCP), Node.js (EJS, Express.js, Firebase)

<https://devpost.com/software/forest-plt0m9>

Created at Hacktech 2019. Transcribes audio from YouTube videos, pipes into Latent Semantic Analysis implementation in Python to summarize chunks of text in parallel.

### Forest (Amazon Alexa Sponsor Prize Winner) Python (BeautifulSoup4, AWS Lambda)

<https://devpost.com/software/cruz hacks-alexa-skill>

Created at CruzHacks 2019. Alexa Skill for UCSC Dining Hall Menu and Student Dining Account Information. Scraped web page using regular expressions and pattern matched to streamline final speech-to-text response.