

SHIVANSH RUSTAGI

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EDUCATION

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

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 custom transformer-inspired 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

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

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.