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 Reddit posts and designed pipeline with pre-training task and sequence-to-sequence + recurrent model.

Huddl.ai — Mountain View, CA
Software Development Engineering Intern — Mar 2020 - Present

- Rewrote Docker image deployment pipeline in Go to reduce memory usage + execution time per service deployed.
- Rewrote internal logging library (Go) to improve memory use 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.
- 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 trafficked routes, integrated geofences into routing and delivery pipelines.

SMLR *Python (Flask, Google Cloud Speech Processing), 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/cruzhacks-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.