VYOM UNADKAT

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EDUCATION

University of Southern California, Los Angeles, United States **January 2020–Exp. December 2021**
Master of Science in Computer Science *GPA: 3.94/4*

University of Mumbai, Mumbai, India **July 2015–May 2019**
Bachelor of Engineering in Information Technology *GPA: 8.66/10*

TECHNICAL SKILLS

Python, Java, C, C++, MySQL, Firebase, TensorFlow, Keras, AWS, Google Cloud, Linux, Git | Swift, iOS development, Tableau | HTML, CSS, JavaScript, PHP, JQuery, React Native | Snowflake, Thoughtspot | MATLAB | iWork.

EXPERIENCE

ZS Associates, Evanston, IL, US - *Business Technology Solutions Associate - Intern* **June 2021–August 2021**

- Automated manual process of obtaining data from multiple vendors by establishing channels improving efficiency by 25%.
- Created a cloud based Datawarehouse on Snowflake for Data Analysis.

Neurosurgery Dept., Keck School of Medicine, USC - *Student Researcher* **March 2021–December 2021**

- Designed a pipeline to extract key features from a video to predict if surgery would be successful.
- *Publication - **Vyom Unadkat**, Dhiraj J Pangal, Guillaume Kugener, et al. Machine Learning Analysis of Intraoperative Video Without the Use of Code, 2021 Congress of Neurological Surgeons Annual Meeting. (Submitted).*

USC Melady Lab - *Student Researcher* **December 2020–April 2021**

- Worked as a Researcher and developed iOS app integrated ML model to anticipate surgical candidacy based on burn images.
- *Publication - S. Huang, S. Rambhatla, L. Trinh, M. Zhang, B. Long, M. Dong, **V. Unadkat**, H. Yenikomshian et al. DL4Burn: Burn Surgical Candidacy Prediction using Multimodal Deep Learning, AMIA 2021 Annual Symposium. (Submitted).*

3D POST, Mumbai, India - *ML Engineer - Intern* **August 2018–December 2018**

- Solved Spaghetti problem in 3D printing by developing a runtime surveillance and analysis module deployed on Raspberry Pi.
- Reduced material wastage and production time by 25% by distinguishing discrepancies while product is being printed.

Quantiphi Analytics, Mumbai, India - *Decision Science Analyst - Intern* **June 2018–August 2018**

- Optimized process of video and audio alignment for multiple languages based on clips to be censored for Viacom US.
- Incorporated Video Encoding algorithms for generating feature vectors and detecting clips to be deleted or censored.
- Delivered an algorithm saving 100+ man hours daily requiring only human supervision.

PROJECTS

Intelligent Traffic Management and Violation Detection System

- Trained a YOLO: Real – Time Object Detection System using Darknet to identify Cars, Buses, Motorbikes, Trucks, Autos.
- Moderated traffic violations such as Jumping red light, standing beyond white line, motorbikes without helmet.
- Captured image of violator and extracted number plate from image, eliminating human efforts by 80%.

Mini Go Game

- Introduced an AI agent based on techniques for Search, Game Playing, and Reinforcement Learning to play Go on a 5x5 board.
- Programmed the AI agent using Minimax Algorithm enhanced by alpha-beta pruning to determine best subsequent move based on concepts of Reinforcement learning.
- Attained accuracy of 93% while playing against random player, greedy player, aggressive player and alpha-beta player.

Siitch

- Developed React Native based iOS app to generate awareness among users about environmental impact of their everyday habits.

Intelligent System for Weather and Congestion Probing

- Led a cross-functional team of 3 and devised a system to predict next day's weather and effect of weather on commute time.
- Implemented ARIMA and RNN-LSTM models to compare accuracy of weather prediction.
- Employed KNN to get commute time after training on past data and next day's temperature from ARIMA model.

PUBLICATIONS

- Authored a book on swift programming titled 'Learning Swift-ly' for iOS development. (Available on Amazon).
- Researched and published a paper titled 'Intelligent Traffic Management System' at 'International Journal of Recent Technology and Engineering (IJRTE) Volume 8 Issues III ISSN: 2277-3878'.
- Published a research paper at IEEE at the ICCSDET 2018: IEEE International Conference on Circuits and Systems in Digital Enterprise Technology titled 'Deep Learning for Financial Prediction'.

More information about projects and publications available at vyomunadkat.com

LEADERSHIP

- Co-founded a research lab in college under guidance of professors and mentored students.
- Delivered lectures on ML and motivated students to pursue Data Science as a member of 'init.ai', data science club.
- Volunteered to teach Photoshop and After Effects to juniors with an interest in computer graphics and animation. Planned and conducted lectures for 2 weeks with more than 500 students.