

# SHRUTI MOHANTY

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## Education

### University of California, Los Angeles (UCLA)

Los Angeles, USA

Master's in Electrical and Computer Engineering (GPA: 4/4)

Sept 2021 - March 2023 (Expected)

**Specialisation:** Signal Processing and Machine Learning

**Coursework:** ML in Bioinformatics, Computer Vision, Data Mining, Neural Networks, Neural Signal Processing, Large Scale Networks Design

### PES University

Bengaluru, India

BTech in Electronics and Communication Engineering (CGPA: 9.14/10)

Aug 2016 - Jul 2020

Minor in Computer Science Engineering

**Coursework:** Computer Networks, Machine Learning, Data Science, Data Structure, Algorithms, DBMS, OS

## Technical Skills

**Languages:** Python, C/C++, HTML/CSS, JavaScript, Matlab

**Technologies/Frameworks:** NodeJs, ReactJs, MongoDB, SQL, Flask, Tensorflow, Keras, PyTorch, Git, Jira

## Work Experience

### Hewlett Packard Enterprise - Aruba Networks

Bengaluru, India

System and Software Engineer 1

Aug 2020 - Jul 2021

Research and Development Intern

Jan 2020 - Aug 2020

- Automated manual testing of L2 VSX Solution Sanity via exhaustive Python test scripts. Reduced manual effort and time, increasing precision by 50%.
- Developed a WebUI used by 2 different QA teams to present detailed automation results in a common platform. Tech stack used - MongoDB, NodeJs, ExpressJs and ReactJs.
- Worked in C and C++ to handle incoming Change Requests (CRs) as part of the Development team for L3 multicast routing protocols - IGMP, MLD, MSDP. Lowered the team CRs by 20% every week.

## Academic and Research Projects

- **Motor Imagery Classification and Subject Identification (UCLA)** [\[Report\]](#) - EEG Signals, Transfer Learning, Architectures - CNN, LSTM, GRU; Tensorflow
- **End to End Pipeline to Classify News Articles (UCLA)** [\[Report\]](#) - NLP, Bag of Words, TF-IDF, Feature Reduction - PCA, NMF, Machine Learning - SVM, Logistic Regression, Grid Search
- **Building a movie recommendation system (UCLA)** [\[Report\]](#) - Naive filtering methods, Model-based filtering, Neighborhood-based filtering, kNN Collaborative filter, NMF Bias features
- **Gene compression using Machine Learning for Cancer type Classification (UCLA)** [\[Report\]](#) - Feature Reduction - PCA, ICA, NMF, VAE; Logistic Regression; Deep Neural Networks
- **Data Analysis - Twitter and CO emission (UCLA)** [\[Report\]](#) - Regression - Ridge, Lasso, Linear, Polynomial; Random Forest, Neural Network, XGBoost, DART.
- **Driver Drowsiness Detection (Intel-PESU engagement)** [\[Report\]](#) - Feature Extraction: Blinks, Yawn, Neck tilt; CNN; Dlib.
- **Convolutional Autoencoder for Image Restoration and Denoising (IISc)** [\[Report\]](#) - Autoencoders, Symmetric filter design, PSNR, Tensorflow, Keras

## Publications

- [1] **German Sign Language Translation using 3D Hand Pose Estimation and Deep Learning** [\[Paper\]](#) *S.Mohanty, S.Prasad, T.Sinha, N.Krupa*; 2020 IEEE REGION 10 CONFERENCE (TENCON), Osaka, Japan
- [2] **Extreme Gradient Boosting Classification of Motor Imagery using CSP** [\[Paper\]](#) *M.Vijay, A.Kashyap, A.Nagarkatti, S.Mohanty, R.Mohan, N.Krupa*; 2020 IEEE 17th India Council International Conference (INDICON), New Delhi, India
- [3] **Design of Real-time Drowsiness Detection System using Dlib** [\[Paper\]](#) *S.Mohanty, S.Hegde, S.Prasad, M.J*; IEEE International WIE Conference (WIECON 2019), Bengaluru, India

## Leadership Skills

- Graduate Teaching Assistant - TA for the courses: " Basic Python with Applications I", and " Advanced Python with Applications II" offered by Dr. Harlin Lee with the Math Department. Led discussion sections for 30 students, held office hours, created quizzes and assisted in grading, and project presentations.
- Member of the Society of Women Engineers - UCLA