Shubh Vachher

Electronics and Instrumentation Student (2014 - Exp. 2018) · BITS Pilani, Goa
Ah1 - 310, BITS Pilani, K.K. Birla Goa Campus, NH 17B, Zuarinagar, Goa 403726, India
(+91) 77220-48384 | f2014471@goa.bits-pilani.ac.in | shubhvachher | shubh-vachher-440b16a2

"Aspiring Data Scientist interested in Software and System development and Internet of Things"

Technical Skills

Programming	**Proficient :** Python, C++, Matlab **Familiar with :** C, Prolog, Verilog HDL, CADENCE, Proteus
Python Tools	Scikit-Learn, Keras, XGBoost, Multi Processing, OpenCV, NumPy, Pandas, Matplotlib, SciPy
Methods	Neural Network Architectures (ANN, CNN), Decision Trees and Forests, SVMs, Ensembles, Data pre-Processing, PCA
Cloud Platforms	Google Cloud Platform, Digital Ocean
Operating Systems	Linux, Windows

Experience

FastneXt — *Tidel Park, Chennai, India*
Data Scientist . Startup — *Dec. 2016 - PRESENT*

- Working on gensim, word embedding models, word similarity predictions
- Worked on NLP of Job Descriptions; picking out "important" words and words related to "skills" required from candidate
- Built a system to predict the likelihood of a candidate shifting jobs using XGBoost; saved the company 84% futile calls on average hiring cycle

Central Electronics Engineering and Research Institute (CEERI) — *Chennai, India*
Winter Intern under Senior Scientist Mohammad Iqbal — *Dec. 2016 - Jan. 2017*

- Developed a logistic regression model with near perfect accuracy on ripe vs unripe fruit images
- Developed supporting mechanism to allow for automatic imaging, grading and sorting of fruits into baskets

Central Electronics Engineering and Research Institute (CEERI) — *Chennai, India*
Summer Intern under Senior Scientist Mohammad Iqbal — *May 2016 - Jul. 2016*

- Developed a fully functional control system for automated citrus fruit sorting achieving 92% accuracy
- Novel method developed to account for partial contour detection that improved system reliability up from 70% to 92%

Research Projects

Performance of SVM vs. KNN vs. RF on EEG data for Epilepsy Prediction — *BITS, Goa, India*
Working alongside Dr. Raviprasad Aduri, Dept. of Biology, BITS Goa — *Jan. 2016 - PRESENT*

- Multiple signal processing techniques were learnt and employed including statistical, hjorth parameters, Fourier and Wavelet transforms
- Multivariate time series EEG Epilepsy data studied with a focus on comparison of ML techniques applied on such data
- Data was mined and curated from the American Epilepsy Society Kaggle competition

DNA-Protein Interaction | Prediction using Machine Learning — *BITS, Goa, India*
Working alongside Dr. Raviprasad Aduri, Dept. of Biology, BITS Goa — *Aug. 2016 - PRESENT*

- Data was mined and curated from the RCSB(Research Collaboratory for Structural Bioinformatics) Protein data bank
- Data was mined, curated and understood for a period of 6 months
- Cutting edge techniques such as Xtreme Gradient Boosting were deployed with accuracies of interaction prediction of over 80%

Fake Currency Note Detection using Deep Neural Networks and SVMs — *BITS, Goa, India*
Part of Quark Machine Learning Summer Challenge — *Jun. 2015 - Jul. 2015*

- Improved upon the accuracies achieved on the UCI Machine Learning Repository dataset
- Achieved upwards of a 99.5% and a 99.7% accuracy making use of cross-validation using the ANN and the SVM respectively

Elevator Control System made using Proteus software — *BITS, Goa, India*
End semester project for the Micro Processor Course — *Mar. 2015 - Apr. 2015*

- Developed control logic for the motor of an elevator on the INTEL 80x86 processor
- Created required memory mapping for RAM, ROM etc. and used circular queue based interrupt IC : INTEL 8259

I have 4 research publications in progress : 2 with Dr. Raviprasad Aduri and 2 with Senior Scientist Mohammad Iqbal to be published within the coming 6 month period (by Dec. '17).