***ACCOMPLISHMENTS:***

* Recognized with “On the Spot” and “Star of the Quarter” award for my performance during tenure in Tata Consultancy Services.

***WORK EXPERIENCE:***

**MathWorks,** Natick, MA. | *Software Engineer in Test* Jul’19

* Architect test tools, write automated test in MATLAB, Simulink environment to validate the features in Simulink V&V product family.
* Contribute to design planning and architecture of features related to “Simulink Test” toolbox and write test to attain highest quality for the product.
* Achieved aggregate code coverage above 90% across languages such as C++, JavaScript and MATLAB by writing test in mentioned languages.

**Leveraged knowledge in** MATLAB/Simulink/Stateflow, AutoCode Gen Products, C, C++, JavaScript, Simulink V&V products, Perforce.

**Mahle,** Lockport, NY. | *Embedded Software Engineering Intern* May’18 – Dec’18

* Developed **MATLAB** GUIDE panel integrated models. Automate Embedded Coder development process for consistency across developers.
* Custom algorithm in VBA for better visualization and data analysis post HIL testing.
* Wrote **MATLAB** scripts with excel integration for better maintenance and versioning of Simulink signals and parameters.
* Auto test case generation for **Simulink** models using **MATLAB** scripts to improve testing cycle by 15%. Test model in **MIL and SIL** environment.
* **ISO 26262** workflow during model design, verification and validation**.**

**Leveraged knowledge in** MATLAB/Simulink/Stateflow, Embedded Coder, Simulink Requirements, Model Advisor, Simulink Coder, C and QML.

**Magna Steyr India Pvt. Ltd.**, | *Associate Engineer* Jan’17 – Jul’17

* Developed, analyzed & verified the Transfer Case control & Transmission Control systems, followed **AUTOSAR** guidelines during implementation.
* Optimized testing tools to get rid of tool version dependency to reduce tool maintenance by 40%.
* Created .dll from **Simulink** models using tool like **RTW** & **Target Link** to increase the testing cycle efficiency by 40%.
* Interface with cross-functional teams to understand requirements and review designs.

**Leveraged knowledge in** MATLAB/Simulink/Stateflow, Python, TargetLink, C, Polyspace Code Prover, MKS PTC Integrity.

**Tata Consultancy Services**, | *System Engineer* Mar’14 – Dec’16

* **Ford Motors (North America) (Jun’2014 - Dec’2016)**
* Designed, developed & verified HVAC algorithms **using MATLAB, Simulink/Stateflow** in MIL & SIL environment using **MAAB** guidelines.
* Developed executable from **Simulink** models using RTW, automate **verification and validation** cycle of FORD CLIMATE HMI (SYNC 2/ SYNC 3) to reduce integration testing cycle time by 83% and saved $3000/person per year.
* Developed in house tools using **m scripts, cmex, C, VBA and HTA** to automate redundant task in agile process to increase efficiency by 30%.
* Auto test case generation (~4000 test cases) of HVAC HMI unit module using VBA to reduce unit testing cycle by 20%.
* Work as a member of the team to analyzes test data, reports to determine if software designs fulfills functional and performance specifications.

**Leveraged knowledge in** MATLAB/Simulink/Stateflow, Simulink Coder, Embedded Coder, C, CAN, C++, Qt, QML and SharePoint.

***EDUCATION:***

**Master of Science in Electrical Engineering** May’19

State University of New York at Buffalo GPA - 3.7

**Bachelor of Engineering, Electronics and Telecommunication**

Shivaji University, India Percentage: 70% (Top 2% in University)

***ACADEMIC PROJECTS:***

**Image Based Search Engine** (Utilized: Python, NumPy, OpenCV) July’18

* Developed image search engine to give image results of various places on campus. Achieved accuracy from 80% to 100%.

**Image disparity estimation and Image Segmentation** (Utilized: Python, NumPy, OpenCV) June’18

* Predict distance of object based on depth maps using left and right camera image input. Create centered image if camera kept between left and right camera using depth maps.
* Performed image segmentation to locate objects and boundaries in image using mean shift algorithm.

**Edge Detection and Histogram Equalization** (Utilized: Python, NumPy) May’18

* Edge detection (Horizontal & Vertical) using Sobel filter and compared execution time between 2D and 1D convolution. Implemented generic algorithm for histogram equalization.

**Digit recognition using Neural Networks (NN)** (Utilized: Python, NumPy, Tensorflow)Mar’18- Apr’18

* Trained Convolutional NN (CNN) on CelebA and MNIST dataset using tensor flow & achieved test accuracy of 79.3%. Designed single layer NN with forward and back propagation to compare results with deep NN. CNN gives best results with almost 99% accuracy.

**Classify diabetic patients using regression techniques** (Utilized: Python, NumPy)Feb’18

* Implemented and trained LDA, QDA and Ridge regression classifiers on diabetes dataset with 64 features and compare accuracy among classifiers using MSE. As the data was linearly separable, linear and ridge regression gave lowest MSE.

***TECHNICAL SKILLS:***

**Software Tools: *Expert:*** MATLAB/Simulink/Stateflow, Simulink Coder (Rtw), Embedded Coder, Simulink V&V and TargetLink.

***Advance:*** PyCharm, Jupyter Notebook, CodeBlocks, Qt and Eclipse.

**Programming Languages: *Expert:*** C, Embedded C, Python 3, Vba, Html and Css.

***Advance:*** VBScript, JavaScript, Shell Script, Qml and C++.