AISHWARYA S. BUDHKAR

201-273-2705 | aishwarya.budhkar@gmail.com | https://github.com/asbudhkar | https://www.linkedin.com/in/abudhkar/

EDUCATION

New York University (Courant Institute of Mathematical Sciences), New York, NY, USA — May 2020
Master of Science | *Computer Science* — GPA 3.72
Courses: Data Structures & Algorithms, Computer Vision, Big Data Application development, Vision Meets ML, Deep learning

Pune Institute of Computer Technology (Savitribai Phule Pune University), Pune, India — June 2018
Bachelor of Engineering | *Computer Engineering* — GPA 3.87
Courses: DS, OS, DBMS, OOP concepts, Computer Networks, Software Engineering, Data mining, Theory of Computation

TECHNICAL SKILLS

Languages: C, C++, Python, Java, Scala | **Data Science**: PyTorch, Tensorflow, Keras, sklearn |**Big Data:** Spark, Hadoop, Pig, Hive, Impala
Tools: Eclipse, Microsoft Visual Studio, QT Creator, OpenCV, MATLAB, IntelliJ, VS Code, PyCharm, Tableau | **Database**: MySQL, DB2

EXPERIENCE

Independent Study, New York, USA — Aug '19 – Jan '20

- Worked to improve **object recognition** in human hand in videos using **Faster RCNN**
- Applied **pose estimation** to detect objects in videos and used **VGG model** for classification to improve accuracy
- Trained a **Neural Network** to predict bounding boxes around objects by using hand keypoints and used the model to predict object bounding box achieving classification loss -0.0402, regressor loss -0.0239, a significant improvement over Faster RCNN
- Collected, annotated data using **OpenCV** and used **PyTorch** for developing the model

Morgan Stanley, New York, USA | *Technology Summer Analyst, Client Intelligence* — Jun '19 – Aug '19

- Deployed a production feature for **hybrid mobile application** to enable users to capture information about clients
- Developed the user interface using **HTML-CSS**, **Angular-6**, **Ionic**, **Typescript** and used **Java Spring** for backend with **DB2** database
- Performed end to end integration and unit tests using **Jasmine**, **Karma** and **Junit** testing frameworks
- Worked in an **Agile** team following **Scrum** methodologies and used **Bitbucket** and Git for collaboration and code reviews

NVIDIA, Pune, India | *Software Development Intern, GeForce Experience Client* — Jul '17 – May '18

- Developed a **one-stop platform** for all gamers' needs by adding features to **GeForce Experience** platform
- Performed **web scraping** to collect game data using APIs and developed UI using **HTML-CSS**, **Angular JS** and **Angular Material**
- Refactored **Nvidia Control Panel** using **QT-Creator** to test the performance and development speed for hybrid application
- Developed UI using **QT-QML** and updated and integrated existing code in **CPP** with QT application

PROJECTS

Infotech Project – Market making Platform — Oct '19 – Feb '20

- Designed and developed **Algorithmic trading platform** with **Trading bots** which generate trading strategies using real orders and high-quality synthetic orders generated using **Generative agent** to maximize profits
- Used **Transformers**, **LSTM** networks for Generative agents, **Reinforcement Learning** techniques like Q-learning for Trading bots
- Built a successful prototype by designing a **scalable architecture** which can handle 2000 bots with latency of 3.7 ms.

Analysis of Flight delays for different US airports — Oct '19 – Dec '19

- Developed a **full stack big data web application** with interactive user interface to predict flight delays by studying the relationship between flight delays and weather data for different US airports using **Spark, HDFS and Flask web framework**
- Performed data analysis to predict the chance of flight delay by training the machine learning model using **Spark SQL, MLlib**
- Scrapped weather data using **NOAA SDK** for an airport and flight time to predict delay with ML model. Achieved 95% accuracy

Split-Brain Auto-Encoder — Feb '19 – May '19

- Successfully applied **self-supervised learning** technique - **Split-Brain AutoEncoder** for classification problem in Vision which splits the input channels into two, feeds them into disjoint sub-networks trained to reconstruct each other's data channels in order to perform well on finetuning task. The model found global features for classification by learning useful representation of input data

Inclusive Images – Kaggle Challenge — Sep '18– Dec '18

- Developed **image recognition system** that can perform well on test images drawn from different geographic distributions than the ones they were trained with **ResNet, DenseNet** baseline models. Used tensorflow to create model, OpenCV for visualization
- Achieved 98 % accuracy on stage 1 test images with a variant of **weighted sampling** to account for class imbalance issue

ACHIEVEMENTS

- NYU Computer Science Department's Most Innovative project prize, NYU GSAS department representative at Grace Hopper
- Third prize in category AI/ML, EQ Technologic- Most innovative project award at Impetus and Concepts '18, India

PUBLICATION

Aishwarya Budhkar, Nikita Patil. **Video-Based Human Action Recognition: Comparative Analysis of Feature Descriptors and Classifiers**. International Journal of Innovative Research in Computer and Communication Engineering, (ISSN:2320-9801) Volume 5, Issue 6, June 2017