

Abhilasha Jain

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EDUCATION

M.S. in Applied Mathematics (Data Science Track) - Northeastern University, Boston, MA, Dec 2023

B.Tech. in Biomedical Engineering - D.Y. Patil University, Navi Mumbai, Maharashtra, Jun 2019

SKILLS

Machine Learning, Database programming and SQL, Data Visualization and Presentations, Data Mapping & Modeling, Data Integrity Validation, Data Analysis, Python Programming, Pandas, NumPy, Scikit-learn, TensorFlow, Keras, Database Management, Statistical Analysis, Data Science with R Programming, Logistic Regression, Microsoft Power BI, Simulation Modeling, Tableau, Mathematical Modeling, Statistical Modeling, Microsoft Office.

PROJECTS

Mathematical Model Python Package

- Created a python module to develop and analyze mathematical model using Pandas, Matplotlib, NumPy and Math libraries.
- Implemented the Lotka-Volterra and Chemostat model, with the scope of adding more models in future.

Brain CT Hemorrhage Classification and Segmentation Using Machine Learning

- Trained a CNN in order to classify location of hemorrhage in CT Scans with an accuracy of 68% on testing set.
- Utilised U-Net, a pre-trained model to train a segmentation network with an accuracy of 92% on testing set.

Deep Learning for Diabetic Retinopathy

- Deployed a CNN classifier on an image database from Kaggle to determine the presence of Diabetic Retinopathy with a 70% accuracy on validation set.
- Implemented a data augmentation method and created a generator pipeline in the Keras module, in order to overcome the small magnitude of training data.

Thesis: Pulse Diagnosis Mathematical Model Using Machine Learning

- Processed raw signals, developed filters to reduce noise in the collected signals.
- Quantified the relationship between signal features and underlying disease using Decision Tree, SVM and ANN with the accuracy of 45%, 55% and 73% respectively.

EXPERIENCE

Project Engineer – WeCan Educational Organization

Mumbai, September 2016 – July 2019

- Troubleshoot systems and equipment to identify and correct design flaws.
- Produced high-quality products that met or exceeded customer requirements and maintained client satisfaction.
- Gathered and analyzed data in order to determine acceptable process limitations and variables.
- Delivered 200+ live sessions (600+ hours) on various technologies such as Embedded Systems, Python, Machine Learning, IoT, etc. including 50+ sessions on boot camps for 4500+ students in 70+ different venues. Engaged with over 20+ clients as an IEEE-certified technical trainer.

Biomedical Research Intern – Acuradyne Medical Systems Pvt. Ltd.

Mumbai, October 2018 – May 2019

- Developed methodologies, instrumentation, procedures for medical application, analyzing data and presenting findings to scientific audience and general public. Met deadlines while maintaining high-quality deliverables.
- Taught principles of medical and laboratory procedures to physicians, residents, students and technicians.

Machine Learning Intern – MmM Ltd.

Mumbai, August 2018 – May 2019

- Conferred with data processing to obtain information on limitations or capabilities for data processing projects.
- Retrieved and manipulate data for analysis of system capabilities and requirements. Wrote well-designed, testable code. Prepared reports or correspondence concerning project specifications, activities or status.
- Utilized scientific analysis and mathematical models to predict and measure outcomes and consequences of designs.

For Further details, Please Check [My Website](#)