Avishek Kumar

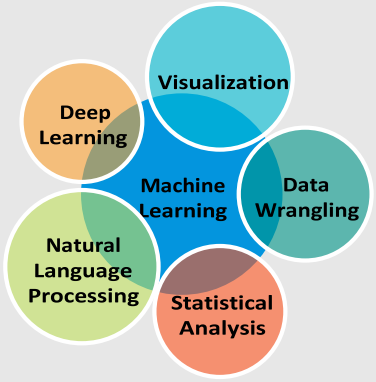
Data Scientist
Machine Learning

MOBILE +91999900011
aviw.upes01@gmail.com
Github phy-ml
India

Summary

Data Scientist with a PhD in STEM and 3+ years of experience in developing algorithms from heuristic to cutting edge deep learning. My passion for problem solving and drive for impactful change has allowed me to deliver innovative solutions that have improved data quality, reduced computational time and increased revenue.

Overview



Tools

Flask — Scikit Pandas Numpy Keras Pytorch NLTK Spacy

Database — CNN RNN K-Means GBM GMM PCA Transformer

Chart-area — Matplotlib Seaborn Dash Plotly

COGS — SQL GIT GCP Docker

Achievements

- Petronas sponsorship for Ph.D.
- Secured RM 70K research grant.
- Publications (Link)

Align-Justify Experience

05/22 - 01/23 **Data Scientist** — **Tanalink, Malaysia**

- Engineered heuristic algorithms to monitor and enhance data quality, resulting in improved accuracy of data analysis by more than 20%.
- Developed a module to identify and eliminate bad data using OpenCV and image classification, resulting in 87% accuracy.
- Designed an algorithm to accurately map vehicles in high-speed motion, increasing the mapping accuracy by more than 90%.
- EDA of geospatial and agronomic datasets to assess worker performance, leading to improved productivity by 12%.

06/21 - 05/22 **Research Intern** — **AirAsia Digital, Malaysia**

- Developed program to automate the planning of cargo loads into airplane using metaheuristic algorithm, reducing computation time by 17%
- Simulated demand-supply interactions and developed a naive pricing strategy for ride hailing services, leading to an increase in revenue by 3%.
- Identified high activity zones using geospatial analysis, which led to 64% customer retention and decline of 2.5% in ride cancellation.

11/18 - 01/23 **Researcher** — **Universiti Teknologi PETRONAS, Malaysia**

- **Thesis**: Physics Informed Deep Learning for non-Newtonian Fluids.
- Designed CNN based algorithm that significantly improved the accuracy of fluid flow modelling by 11%.
- Contributed to the advancement of AI/ML in computational fluid flow thorough publication in leading journals.

2016 - 2018 **Data Analyst** — **Petrolink Services, India**

- Aggregated data from various sources to compile drilling KPI reports and highlighted key areas for optimization, reducing overall cost per foot by 10%.
- Interpreted and developed analytical tools to monitor trend and pattern for different operational phases which improved data quality by 20%.

CLIPBOARD Research Projects

Indian Theme: Neural Style Transfer — **Github**

- Adaptation of style transfer method to create personalized abstract Indian theme art work.

NEURAL-SOLVER — **Github**

- Python based AI simulator that uses neural network to solve the different mathematical differential equations without using any kind of training data.

GRADUATION-CAP Education

2018 - 2023 **Ph.D** — **Universiti Teknologi PETRONAS**, Malaysia
Machine Learning, Fluid Dynamics

2013 - 2015 **Masters** — **Andhra University**, India
Petroleum Engineering

2009 - 2013 **Bachelors** — **University of Petroleum & Energy Studies**

Petroleum Engineering India

SCROLL Skills

• Applied Mathematics • Probability • Linear Algebra • Deep Learning

• Python Programming

• Optimization