**Rayan Kejriwal**

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**Data Science | Machine Learning | Quantitative Finance | Mathematics**

Data Science Enthusiast actively following AI research community and seeking for automation in the real- world. Always willing to live in a competitive environment, meeting people and exploring new technologies leveraging the power of AI.

**EDUCATION**

**B.Tech. Electronics and Communication 07/2018 – Present**

Indian Institute of Information Technology, Allahabad CGPA - 8.19/10

**Senior Secondary** **04/2017 – 04/2018**

Prince International School, Jaipur CBSE - 87.4%

**Secondary**  **04/2015 – 04/2016**

Modern Public School, Bhiwadi CBSE – 10/10

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| **Technical Skills**   * **Languages**: C++, Python, SQL * **Frameworks**: PyTorch, Fastai * **Tools/Software**: Jupyter, VBA Excel, MATLAB * **Libraries**: Numpy, Pandas, Scikit, Matplotlib, Seaborn | **Key Skills**  Machine Learning | Neural Nets | EDA | Deep Reinforcement Learning | Numerical Methods |  Object-Oriented Programming | Probability |  Statistics | Quantitative Analysis |  Hypotheses Testing | Timeseries |

**SKILLS**

**PROJECTS**

**Numerai** **07/2021 – Present**

**Open-Source Hedge Fund**

* Known as the hardest data science tournament on the planet
* Stock Data Modeling

**Human Activity Recognition System** **04/2021 – 05/2021**

**B.Tech. Mini Project**

* Activity Classification based on Real-time Data from MPU-6050 sensor fitted on a Wearable Band
* Feature Engineered 140 Predictive Variables

**Kaggle Competitions** **12/2020 – Present**

**Coleridge Initiative**

* Entity Extraction using Transformers API.

**Jane Street Market Prediction**

* Binary Classification, Financial Timeseries Modeling using Neural Network.
* Processing with NVTabular + Rapids API along with Dask Framework including floating-point precision and Numba Speedup.

**Other Major Works** **06/2020 – 04/2021**

**Quant**

* Implemented Greeks (using FDM), Jump Diffusion Model, Implied Volatility Model, and European Vanilla option payoff using Black Scholes, Monte Carlo and Asian Discrete Path dependent formula. Currently Studying Financial applications using Reinforcement Learning.
* Used generic programming and functors in C++.
* Other supporting numerical method implementations include Decomposition methods – LU, Cholesky, QR and Thomas Algorithm using Eigen Library.

**Multilabel Face Classification: CelebA Dataset**

* To characterize Celebrity faces with multi-label face attributes, used Fastai Data Block API, transfer learning using Resnet-50, and fine-tuning to achieve an accuracy of 92%
* Deployed the web app using Jupyter Widgets and Voila

**Image Segmentation: Camvid Dataset**

* Pixel wise Segmentation of image using Dynamic U-NET, also implemented from scratch.
* Further improved the model by using novel approaches like image resizing, ranger optimizer, fit-flat cos, and Mish activation. Achieved state-of-the-art.

**Price Prediction: Blue Book for Bulldozers**

* Predicting Auction Sale Prices of heavy automobile equipment used Random Forest also implemented Random forest Regressor from scratch.
* Model Interpretation using RF feature importance, Tree Interpreter, Partial Dependence Plot (waterfall), and Tree Variance.

**Other Datasets Worked**

* Rossman, Oxford Pet, Biwi Head Pose, RedWine, Adult, MNIST, CIFAR, IMDB, House Prediction, and Titanic

**RESPONSIBILITIES**

**IIITA Info Communication and Incubation Centre 08/2018 – 06/2021**

**Overall Coordinator**

* Invited Global AI Leaders from **FAIR**, **Microsoft**, **IBM**, **NUS**, **U of T**, and **Harvard** at E-Summit'21 conference **sponsored by** **Walmart** and **Cisco**, **lead a team of 89** People; conducted **3** successful editions of E-Summit so far. (2018-2021)
* **Lead Organizer** of B-Hacks'20. (2020)
* **Campus Director** of **Global Hult Prize**, IIIT Allahabad Chapter for the first time. (2020)
* Visited 25+ Coworking spaces in Delhi-NCR to collaborate with start-ups sponsored by NewGen IEDC (2018)

**HONORS**

* GATE Statistics: AIR-127 (2021)
* Dronathon 2019: Overall Winner (2019)
* 1st North India Open Karate Championship: Bronze (2012), Silver (2013)

**INTERESTS**

* Martial Arts (Karate), Yoga and Meditation, Casual Music (Synth and Vocals).