Prakhar Rathi

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Education

Shiv Nadar University   **Aug. 2018 – May 2022**
B.Tech in Computer Science Engineering (Minor in Economics)   *Greater Noida, Uttar Pradesh*
Cumulative GPA: 9.16 (High Distinction)
Societies: Google DSC (Lead), Debating Society (President), ACM (Vice Chair), Business Society (Co-ordinator)
Honors: Dean's List for Academic Excellence (Top 10% in the department)

International Institute of Information Technology   **July 2022**
Summer Institute in Computational Social Science   *Hyderabad, India*

Technical Skills

Languages: Python, R, HTML/CSS, SQL, C, Java, PHP
Developer Tools: STATA, Excel, Google Cloud Platform, LaTeX, Streamlit
Technologies/Frameworks: Django, Flask, Keras, PyTorch, Linux, Bootstrap, Azure

Experience

American Express   **Aug 2022 – Present**
Data Scientist   *Gurgaon, India*

- Developed and deployed machine learning operations within the Global Optimization and Call Management (GOCM) team to quantify the factors that affect key metrics within the team, with an mean average percentage error of 7%
- Developed a model to recommend a staffing strategy and created staffing plans for the EMEA, Americas and APAC regions. This was spearheaded during my internship at American Express from January to June.
- Lead the efficiency efforts within the Global New Accounts (GNA) team using scenario analysis models identify scope for optimizing workforce performance metrics, saving over $500,000 in the EMEA and US market.

AI4Bharat, IIT Madras   **Jun 2022 – Aug 2022**
ML Engineer   *Chennai, India*

- Developed a Django and React based web portal to annotate and store the text translations from English to Indian languages and vice-versa. Developed API endpoints for deploying Large Language Models on Azure and webhooks for delivery of Translation and Transcription services.
- Implemented multiple async functionalities in the project using celery and Django to speed up the application.

University of Warwick   **June 2021 – August 2021**
Data Science for Social Good Research Fellow   *Warwick, United Kingdom (Remote)*

- Worked on a project with the German Federal Ministry for Economic Affairs (BMWi) aimed at strengthening BMWi's forecasts by developing a forecasting model to predict economic development in Germany.
- Developed vector autoregression models to forecast quarterly unemployment rates at the county level in Germany using fine-grained data on the demographic, economic and sectoral structure of regions.
- Collaborated with a diverse team of 4 researchers from Asia and Europe along with mentors from Alan Turing Institute, UK and Ludwig Maximilian University, Germany.

National Institute for Research in Digital Science and Technology (Inria)   **March 2021 – June 2021**
Research Intern   *Lille, France (Remote)*

- Worked with the highest ranked research institute in France on a problem of suicide analysis in Lille.
- Used socio-economic data collected from people who attempted suicide to identify factors contributing to first time and repeat suicide attempts.
- Our model determined the probability of suicide attempts in the next 6 months with an AUC Score of 0.89. This work will be submitted to the local government in Lille and a paper will also be written.

Omdena   **June 2020 – July 2020**
Junior Machine Learning Engineer   *(Part-time, Remote)*

- Worked on a project for the Botnar Foundation, Switzerland to identify youth aspirations and concerns due to the COVID19 pandemic while collaborating with a team of 50 engineers and data scientists from across the globe.
- Crowd-sourced the data from social media websites and our work to create counselling services and mental well-being indicators for young people in the European Union.
- Served as a team manager for the Reddit data collection team where we collected and organized over 40,000 posts.

Select Projects

Intellimart | *Python, Django, HTML, CSS, JavaScript* **May 2021**

- Built a Django application to display all nearby stores, product catalog and stock-on-hand to prevent hoarding and breach of social distancing protocol for users and streamline inventory management for local shopkeepers.

- Designed in the time of the Covid-19 pandemic to prevent hoarding and follow social distancing.

Data Storyteller Application | *Python, Streamlit, Scikit-Learn* **Feb 2021**

- Automated analytical tool to generate smart feeds through natural language generation techniques and identify patterns in data, interpret results, and apply ML to produce a contextual output story for business users.

- It is able to analyse data on behalf of users and perform machine learning, feature selection and model evaluation.

Stock Market Trend Predictor | *Keras, Python, Jupyter Notebook* **January 2020**

- Used Recurrent Neural Networks and LSTM implementation with 60-day time steps to predict the trends of Alphabet Inc. closing stock prices with a mean absolute error of 9.641.

Positions of Responsibility

Student Council, Shiv Nadar University **June 2020 − April 2021**
Secretary of Senate *Shiv Nadar University*

- Elected as the Secretary of Senate to lead and manage the senate comprised of 41 senate members, in the decision-making process of the student council.

- Responsible for ensuring that the senate decisions and information is disseminated to the student body regularly.

Department of Computer Science **August 2021 − May 2022**
Teaching Assistant *Shiv Nadar University*

- Teaching Assistant for the course **Introduction to Computer Programming** and the course **Introduction to Machine Learning**, mentoring a batch of 80 students each.

- Supervised the practical classes for 2 semester and graded the lab work and assignments.

Publications

- Raman Dutt, Prakhar Rathi, Vinita Krishna. Novel mixed-encoding for forecasting patent grant duration, World Patent Information, An Elsevier Journal.

- Communicating High-Street Bakery Sales Predictions Using Counterfactual Explanations, Alan Turing Institute Data Study Group (under review).

Awards and Achievements

- Team India, KPMG Ideation Challenge (2021) - **Represented Team India in the Global Finals** after being selected from among 12000 teams.
- Secured the University Scholarship for Academic Excellence which supports 90% of my tuition fee expenses.

- India Finalist, Smart India Hackathon (2020)
- Intel AI Edge Scholar (2019)
- AI Crowd Blitz Hackathon - Rank 7/400 (2020)
- Amazon AWS Scholar (2022)