Arun Thiagarajan

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EDUCATION

- **PSG College of Technology** — Coimbatore, India
  Integrated Masters in Data Science; GPA: 3.63 (9.08/10.0) — *July 2016 – May 2021*

EXPERIENCE

- **Indian Institute of Technology, Madras** — Chennai, India
  Project Assistant — *July '21 - Present*
  - Built a malware detection framework and implemented predictive modelling algorithms for detecting malware from network traffic data.
  - Built an open-source packet logging tool which can capture and parse network packets at high speed (tested upto 50 MB/sec) and detect duplicate packets using a BloomFilter(code).

- **Tata Consultancy Services** — Chennai, India
  Research and Development Intern — *May '19 - Nov '19*
  - Analyzed time series sales data and built time-series forecasting models for prediction future sales.
  - Studied dynamic pricing of interdependent and perishable products using reinforcement learning techniques and proposed a Q-Learning model which achieved a yield of 16% higher than passive pricing techniques.

- **in-d.ai** — Chennai, India
  Machine Learning Enginnering Intern — *June '20 - July '20*
  - Developed an AI engine for classifying documents and used NLP techniques for named-entity extraction. The solution was deployed for real-time use using a Flask based web framework.
  - Used IAM Handwriting dataset and augmented it to build a robust convolutional netural network for recognizing handwritten words to recognize handwritten characters (accuracy achieved: 64%).

PAPERS AND OPEN SOURCE CONTRIBUTIONS

- **Data Driven Analysis of Food Corporation of India's Operations and Recommendations**   paper
  Unpublished Manuscript
  - Collected available open data, studied operations of Food Corporation of India and found factors which influence states proposals, efficient utilization of foodgrains and highlighted challenges in providing food security under the current system and suggested policy recommendations.

- **DeepChem** — PRs
  - Implementing machine learning models based on research papers for applying AI in scientific problems.
  - Improved testing infrastructure and worked on project maintanence like improving code healthiness, creating tutorials, performing code reviews, improving documentation etc.

PROJECTS

- **TadGAN**: Implemented the paper Time Series Anomaly Detection using Generative Adversarial Networks for performing anomalye detection in time series data (code)
- **Budget Analyzer**: An application to keep track of income and expenses and predicting future expenses using time series analysis. Tools and technologies used: MongoDb for backend and PyQt for front end. (code).

OTHERS

- Gave a talk at Pycon India 2021 about DeepChem.
- Awarded Achievement Award for outstanding curricular, co-curricular and extra-curricular achievements in MSc Data Science class of 2021.
- A member of Toastmasters International.
- Conducted *Cricket and Statistics* program at Mango Education for kids aged between 11 - 15.