Arman Tavana

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Work Experience

Inuvo, San Jose, CA — August 2022- Present
Data Scientist and Machine Learning Engineer

- **Media Mix Modeling Product**: Led the development and deployment of an AI-driven Media Mix Modeling product, achieving a 30-50% improvement in Return on Ad Spend (ROAS) for clients.
  - Aggregated and processed datasets from multiple marketing channels including TV, digital, social media, and offline sources.
  - Designed and implemented advanced machine learning models and algorithms such as Gradient Boosting to model the impact of various marketing activities on ROAS.
  - Leveraged advanced optimization techniques and algorithms to recommend optimal budget allocation across channels, maximizing overall campaign performance.
  - Worked closely with clients to understand their business objectives, providing tailored insights and actionable recommendations.
- **Recommendation Engine**: Developed a recommendation engine to enhance targeted advertising for TV ads which led to the creation of a new product.
  - Compiled and preprocessed data from over 100,000 movies and TV shows, including metadata and user data.
  - Implemented content-based filtering techniques and machine learning models such as Large Language Models to rank and recommend relevant movies and TV shows.
- **Profitable Ad Campaign Classification**: Built and deployed a classification model to identify profitable ad campaigns, resulting in an average 25% increase in profit margins.
  - Developed and deployed machine learning algorithms to classify ad campaigns by profitability, integrating them into production for real-time decision-making.
  - Continuously monitored model performance, refining, and retraining it to adapt to new data.

SubWiFi, New York City, NY — November 2021- July 2022
Data Scientist Intern (Remote)

- Built an ETL pipeline to collect and store data from multiple sources to PostgreSQL for processing and monitoring.
- Built a dashboard web application to visualize key factors using PostgreSQL, Flask, pandas, and Plotly and deployed.
- Developed machine learning models for user segmentation to detect super users. Developed and implemented an experiment to apply the model and increased social media followers by over 50%.

St. Lawrence University, Canton, NY — June 2020 – October 2020
Full Stack Developer

- Implemented a website for a farm-to-table project for a university department enabling events management.
- Crafted a dynamic website with JavaScript, HTML, and CSS for frontend, and MongoDB with Node.js for backend.

Key Projects

Predicting Implicit Ratings

- Achieved a log loss of 0.4065 and ranked third in leaderboard among 50+ teams in the Kaggle competition.
- Developed multiple negative sampling techniques and different models such as matrix factorization and neural networks while using the method of embeddings for users and items.

Education

University of San Francisco, San Francisco, CA — July 2022
Master of Science in Data Science
Courses: Machine Learning, Deep Learning, NLP, Probability, Time Series Analysis, Design of Experiments (A/B Testing), Relational Databases (SQL), NoSQL (MongoDB), Data Structures and Algorithms, Distributed Computing (Apache Spark)

St. Lawrence University, Canton, NY — May 2021
Bachelor of Science in Computer Science (Minors: Mathematics and Economics)

Skills

Python (Pandas, NumPy, SciPy, Scikit-Learn, Matplotlib, Flask), Machine Learning, NLP, Data Mining, Probability Theory, Statistical Analysis, Algorithm Analysis, Time Series Analysis, PyTorch, Apache Spark (PySpark), SQL (PostgreSQL, MySQL), NoSQL (MongoDB), Airflow, Java, AWS (S3, RDS, EC2, EMR), Databricks