Ananya Deepak Deoghare

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Technical Skills

Tools and Languages:
Git, Python, MATLAB, C, C++, Java, SQL, Pandas, Scikit-learn, Tensorflow, Pytorch, OpenCV, Scilab, Visual Studio, Pycharm, Perforce, Amazon Redshift, Hive

Statistics/Machine Learning:
Statistical Analysis, Data Mining, Data Visualization, Informatica, ETL, Tableau, Image and Video Processing, Computer Vision, Clustering and Classification, Deep Learning, Feature Extraction, Signal processing, Generative AI, LLM(Large Language Models)

Experience

Associate Algorithm Engineering Jun 2023 – Present
Quinstreet *Foster City, CA*

- Utilized predictive modeling and feature engineering to conduct comprehensive data analysis on a personal loans user database, identifying key trends and patterns. Leveraged clustering algorithms and A/B testing to optimize click-through rates for advertisers, projected to increase engagement by 10%.
- Developed, deployed, and optimized machine learning models, including Gradient Boosting Machines (GBM), by leveraging hyperparameter tuning, cross-validation, and feature selection for ranking and predictive analysis in the banking domain. Achieved enhanced model accuracy and relevance, directly impacting business outcomes through improved decision-making and actionable insights.
- Conducted weekly analysis of user interactions to optimize the machine learning model, leading to a 5% increase in accuracy and a 10% decrease in error rate.
- Applied extensive feature engineering and selection techniques to identify and extract key predictive factors, significantly improving model efficiency, accuracy, and interpretability for both banking and personal loans data.
- Collaborated closely with data engineering and product teams to deploy machine learning models into production, delivering real-time insights that informed high-stakes decision-making.
- Conducted continuous model evaluation and optimization, utilizing techniques in hyperparameter tuning and cross-validation to ensure robust, high-performing models aligned with business goals.
- Designed and implemented a comprehensive testing suite for a critical simulator, leveraging Cython for computational optimization, achieving a 50% reduction in processing time and ensuring robust alignment with production-grade standards.

Engineering Intern Jun 2022 – Sep 2022
VidMob *New York, NY*

- Developed and managed the full-stack development of an ad-tech platform using Python and AI, integrating machine learning pipelines for analyzing creative performance and ad effectiveness.
- Designed and implemented advanced machine learning algorithms, including deep learning models for computer vision, achieving a 25% increase in accuracy for scoring ad engagement data.
- Conducted extensive testing and evaluation of new machine learning-based methods for predicting online advertisement engagement, resulting in a 5% boost in overall client satisfaction rates.
- Collaborated with cross-functional teams, including data, product, and engineering, on the design and deployment of AI algorithms such as predictive modeling and recommendation systems, improving overall team efficiency by 15%.

Student Researcher Jul 2020 – January 2023
University of California, Los Angeles(UCLA) *Los Angeles, CA*

- Collaborated with a team of engineers to develop and implement a state-of-the-art Shift Robust Loss Function for rPPG, resulting in decreased error by 40%.
- Worked with team to diagnose skin-tone bias in the medical application using multimodal fusion between radar and RBG data[1]. As a result, the team was able to develop an algorithm that improved accuracy by 75%.

Software Engineer & Data Analyst Jun 2019 – Jul 2021
Accenture *Bangalore, India*

- Qualified as a semi-finalist in the Global Innovation Challenge held by Accenture after demonstrating exceptional problem-solving skills, creativity, and ability to work under pressure.
- Developed and implemented innovative data analysis techniques to enhance the accuracy of drug sales performance monitoring, resulting in a 20% increase in competitor match rate and recognition from the Australian team.

- Leveraged expertise in ETL and BI tools to represent monthly and weekly effectiveness of client resources, leading to a 15% boost in productivity.
- Developed and implemented agile development methodologies to enhance team productivity, resulting in a 25% increase in project completion rate.
- Spearheaded the creation and implementation of automated data cleaning and processing workflows, resulting in a 50% reduction in analysis time for pharma sales data.

Education

University of California, Los Angeles(UCLA) Expected 2023
MS in Electrical and Computer Engineering [GPA: 3.97/4.0] *Los Angeles, CA*

PES University Aug 2015 - Aug 2019
BTech in Electronics and Communication Engineering *Bangalore, India*

Eyantra 2016 Robotics Competition - Coached a team of 3 students to the semi-finals in a National Level Robotics Competition where I successfully managed and delegated tasks to ensure that the team met all deadlines. The robot performed navigation tasks and we build an arm for the robot to pick up objects.

Projects

- **Automatic Garbage Segregator:**
  1) Engineered a crane that could segregate waste into biodegradable, non-biodegradable, and electronic waste with an accuracy of 95.18%.
  2) Tested various Feature Extraction techniques like PCA, LDR, and Convolutional Neural Networks.
- **Multi-Class EEG Motor Imagery Classification Using Deep Learning Architectures**
  1) Implemented various deep learning techniques, including CNNs, LSTMs, RNNs, VAEs, Transformers and attention to achieve multi-class classification accuracy of EEG signals for motor imagery tasks.
  2) Demonstrated the potential of deep learning techniques for EEG signal analysis by achieving a classification accuracy rate of 75% on the entire dataset.
- **Detecting Pulse from Head Movement:** I replicated the paper "Detecting Pulse from Head Movement" by Guha Balakrishnan, Fredo Durand, John Guttag.The code was able to detect the Heartbeat with an error of around 2-5%. The code was done in Python and it took around 2.5 weeks to complete

Publication & Certifications

SIGGRAPH 2022 Blending camera and 77 GHz radar sensing for equitable, robust plethysmography

Extracurricular Activities

- I am a professional Bharatnatyam Dancer and was in the top 50 in the Senior exam.
- Heavily participated in **IEEE Symposium Series on Computational Intelligence** held in Bangalore, presenting research and contributing to discussions.
- Member of the **Centre of Intelligent Systems** (a research center) at PES University, where I conducted research and collaborated with other members.
- Co-ran the Operations team for Epsilon 2016, a science fest that saw over 100 events and 2000 participants.