ANANTH RADHAKRISHNAN

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EDUCATION

University of California, San Diego (UCSD) San Diego, CA

Master of Science in Computer Science & Engineering | TA for DSC-291 | *GPA: 4.0/4.0* *Sep 2023 - Mar 2025*

Coursework: AI Probabilistic Learning, Recommender Systems, Algorithm Design & Analysis, Unsupervised Learning

Indian Institute of Technology Kharagpur (IIT KGP) Kharagpur, India

Bachelors of Technology (Honors) in Instrumentation Engineering | GPA: 8.66/10 *Jun 2017 - Jun 2021*

Minor in Computer Science & Engineering

Coursework: Algorithms, ML, AI, OS, NLP, Image Processing, DL,Information Retrieval,Computer Networks,Computer Architecture

SKILLS

Programming Languages	C++, Python, Java, SQL, MongoDB, C, Selenium, JavaScript, HTML, CSS, Assembly language
Libraries & Frameworks	Scikit-learn, NumPy, Pandas, REST, Docker, Keras, Teradata, TensorFlow, Git, Insomnia,AWS

WORK EXPERIENCE

Barclays Chennai, India

Software Developer - Full Stack | Dcypher *Jul 2022 - Jul 2023*

- Developed an application that automates masking, tokenization & migration of data from PROD to Non PROD environment
- Designed a Python package to incorporate teradata to SQL server file transfer, increasing app utilization by **55%** within Barclays
- Integrated event notification, masking tools that were used by **60**+ teams(**1K**+ users) to monitor & customize their datacopy tasks
- Implemented OOPs concept across the entire codebase & optimized the code by revamping the application using Python, MySQL

Software Developer - Backend | Cloud IT *Aug 2021 - Jul 2022*

- Spearheaded the development of CloudIT application, a service used by **875k** live consumers, using Java, Spring Boot & MongoDB
- Developed 3 REST APIs & optimized data ingestion process using multithreading, reducing response time of upload service by **40%**
- Executed legacy code migration of CloudIT, improving code maintainability by **60%** and boost in service performance by **20%**
- Collaborated with multiple product teams and handled **30%** of Barclays Document Journeys in PROD through Jenkins & Docker

Graduate Intern - ML | AI Automation *Jun 2020 - Jul 2020*

- Developed an AI-based Universal Test Automation tool for robust script-less application testing using ML & Computer Vision
- Implemented NLTK (NLP) techniques to pre-process documents and trained a **SVM** model to classify and test input fields
- Achieved accuracy of **93%** during prelimnary testing. Tool automates large-scale manual application testing thus reducing cost

RESEARCH EXPERIENCE

Graph Attention Network (DL) for Brain Mapping UCSD, USA

Research Project *Oct 2023 - Present*

- Developed a novel GAT network to investigate the spatial dependencies & correlation between different EEG networks & emotions
- Designed a multimodal transformer architecture and achieved accuracy of **82%** in classifying opioid misusers from healthy subjects

Physiological Signal Analysis using ML (IIT KGP-UMBC-US ARL) IIT Kharagpur, India

Undergraduate Thesis Project *May 2020 - Jun 2021*

- Built a Data-driven ML (GB,KNN) framework to characterize the alterations in physiological dynamics during a VR shooting task
- Implemented a bio-toolkit using stacked CNN and LSTM neural network blocks for multimodal EEG ECG signal analysis-**Physionet**
- Achieved accuracy close to State of Art in binary**(95%)** & 3-way**(80%)** classification. Published,"*Affective Physiological State Analysis & Interpretable Predictive Modeling of Marksmanship in Go/NoGo VR Shooting Difficulty Task*" in **IEEE Affective Computing**

PROJECTS

Multimodal BPR for Cold-Start Problems UCSD | *Sep 2023 - Dec 2023*

- Developed Multimodal-BPR recommender system using images & texts addressing the cold-start problem for enhanced accuracy
- Explored diverse fusion techniques to improve scalability for broader dataset- achieved **0.87** AUC score while testing on goodreads

Traffic Flow Prediction IIT KGP | *Jan 2021 - Apr 2021*

- Designed a traffic forecasting model combining regression techniques (Python). Achieved accuracy of **82%** in predicting congestion

Heuristic Guided Search Algorithms - A* IIT KGP | *Jan 2020 - Apr 2020*

- Developed a C++ library to perform A* algorithm & solve search problems in OR graphs. Compatible with all problem descriptions