

# ANANTH RADHAKRISHNAN

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## EDUCATION

### UNIVERSITY OF CALIFORNIA, SAN DIEGO (UCSD)

San Diego, CA

Master of Science in Computer Science & Engineering | Teaching Assistant for CSE-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, Nodejs

**Libraries & Frameworks** Scikit-learn, NumPy, Pandas, REST, Docker, Keras, Teradata, TensorFlow, Git, Insomnia, AWS, PyTorch

## WORK EXPERIENCE

### BARCLAYS - SOFTWARE DEVELOPER

Chennai, India

**Full Stack | Dcypher**

Aug 2021 - 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 data copy tasks
- Implemented OOPs concept across the entire codebase & optimized the code by revamping the application using Python, MySQL

**Backend | Cloud IT**

- 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

### BARCLAYS - GRADUATE INTERN

Pune, India

**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 an **SVM** model to classify and test input fields
- Achieved accuracy of **93%** during preliminary testing. Tool automates large-scale manual application testing thus reducing cost

## RESEARCH

### Graduate Student Researcher - 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

### Student Researcher -Physiological Signal Analysis using ML (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