

Aditya Ramachandra

• Phone: (812) 929-4657 • Email: ar83@iu.edu • LinkedIn: <https://www.linkedin.com/in/aditya-rjl/>

EDUCATION

- **Indiana University Bloomington** Bloomington, IN
MS in Computer Science; GPA: 3.95 *Aug 2022 - Present*
- **PES University** Bengaluru, India
B.Tech in Computer Science; GPA: 3.72 (8.47/10.0) *Sep 2016 - Nov 2020*

COURSEWORK

- **Graduate Courses:** Software Engineering, Applied Database Technologies, Social Media Informatics, Data Mining, Applied Algorithms, Elements of Artificial Intelligence, Knowledge Graphs and LLMs, Deep Learning, Computer Networks, Security for Networked Systems.
- **Online Courses:** Machine Learning(Coursera), Introduction to Reinforcement Learning (Deepmind), DeepLearning.AI.

WORK EXPERIENCE

- **Infibeam Avenues** Bengaluru, India
Software Developer *Aug 2020 - May 2022*
 - **Virtual Bank Account Creation:** Designed and tested the account creation flow for offering loans to sellers on the Government e-Marketplace (GEM) benefiting ~190k sellers.
 - **Seller Registration Service:** Scaled the registration service using AngularJS and Ruby on Rails to handle multi-seller account creation for proprietors with the same business identity number.
 - **Logistics Service:** Collaborated with India Post and added a new logistics service which enabled all the sellers to book for consignment shipping online.
 - **CAPTCHA verification:** Fixed security vulnerabilities by adding CAPTCHA layers for several user actions, improving the overall security of the platform and safeguarding the data of ~50k buyers.
- **Infibeam Avenues** Bengaluru, India
Software Developer Intern *Jan 2020 - Jul 2020*
 - **Product Search:** Refined search for 150+ product categories using a custom entity extraction model leveraging OpenNLP-based tokenization and featurization.
 - **Real-time Indexing:** Integrated with Apache Solr search system to provide real-time search optimized for high-volume traffic.

ACADEMIC PROJECTS

- **Knowledge Graph Integration for Enhanced LLM Reasoning (ongoing):** Enhancing Large Language Models (LLMs) by integrating knowledge graphs, processing triplets to construct a graph database, and optimizing LLM performance through graph-based queries.
- **Academic Coursework Planner:** Engineered an interactive academic info system in Python leveraging OpenAI GPT3 and Pinecone DB, and deployed on Microsoft Azure.
- **Reinforcement Learning based Movie Recommendations:** Developed a cutting-edge Deep Q-Network-based recommender system, outperforming traditional methods with a 68% precision rate (threshold user rating: 3.2).
- **Food Review Summarizer:** Engineered an efficient Seq2Seq model with bidirectional LSTM, GloVe embeddings, and attention for automatic food review summarization.
- **Essay Grading with NLP:** Evaluated SVR and LSTM models using Cohen's Kappa coefficient for automated essay grading.

PRESENTATIONS AND CONFERENCES

- Developed and trained a parser for identification of similar scripted language characters using SVM and K-NN algorithms for image pre-processing, which was presented at the International Conference on Adaptive Computational Intelligence (ICACI-2019).
- Participated in WSDM - KKBBox's Churn Prediction Challenge to perform Customer Churn Prediction and emulated results with 98% MER and 0.074 log loss error.

SKILLS SUMMARY

- **Programming Languages:** Python, Java, C, C++, R, Scala
- **Libraries and Frameworks:** NumPy, Pandas, and scikit-learn
- **Databases:** MySQL, PostgreSQL, MongoDB, Neo4j, Cassandra
- **Big Data:** Hadoop, HDFS, Zookeeper
- **Cloud Computing:** Docker, AWS, GCP, Azure
- **Generative AI and Data Modeling:** LLM, OpenAI, Knowledge Graph, Pinecone DB, Spark