

# Aditya Ramachandra

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## EDUCATION

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- **Indiana University Bloomington** Bloomington, IN  
*MS in Computer Science; GPA: 3.97* *Aug 2022 - Present*
- **PES University** Bengaluru, India  
*B.Tech in Computer Science; GPA: 3.72 (8.47/10.0)* *Sep 2016 - Nov 2020*

## COURSEWORK

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- **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, Applying ML techniques in Computational Linguistics.
- **Online Courses:** Machine Learning(Coursera), Introduction to Reinforcement Learning (Deepmind), DeepLearning.AI.

## WORK EXPERIENCE

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- **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

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- **Real-time Chat App(ongoing):** Led end-to-end development of a Chat App System, integrating FastAPI, Django, Kafka, Elasticsearch for real-time chat, user authentication, and communication, with MySQL/PostgreSQL databases. Envisioned comprehensive monitoring solutions utilizing Grafana and Prometheus for optimal system performance and scalability.
- **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

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- 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

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- **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, Kafka, Redis, Elastic Search
- **Generative AI and Data Modeling:** LLM, OpenAI, Knowledge Graph, Pinecone DB, Spark