Ishika Agarwal

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Education

MS, University of Illinois, Urbana-Champaign **Aug 2022 – May 2024**

Major: Computer Science (emphasis on ML research)

- GPA: 3.88
- Relevant courses: Applied Machine Learning, Deep Learning, Adv. Algorithms, Adv. Information Retrieval, Deep Generative and Dynamic Models, Computer Vision, ML + Data Systems, Advanced NLP

BS, Purdue University **July 2019 – May 2022**

Major: Computer Science with a concentration in Machine Learning

- GPA: 3.88, Dean's list
- Relevant courses: Data Structures (Java), Computer Architecture (C), Systems Programming (Linux), Data Mining and Machine Learning (Python), Algorithm Analysis, Web Information Search and Management
- Teaching Assistant for Java Programming and C Programming

Skills

- Languages: Python, Java, C, C#, R, JavaScript, Scala
- Machine Learning Frameworks: TensorFlow, Pytorch, Keras, Open AI Gym, Mujoco, Jupyter
- Tools & Frameworks: Git, GNU Debugger, Java Profilers, Tomcat, Maven, Docker, Postman
- Big Data Technologies: Spark, Hadoop, Airflow

Experience

Research Assistant – University of Illinois, Urbana-Champaign **Aug 2022 – Present**

RA in Professor Hanghang Tong's IDEA Lab@UIUC. The main focus of the lab lies in large scale data mining and machine learning, especially for graph and multimedia data with applications to social networks analysis, healthcare, cyber-security, and e-commerce.

ML Engineering Intern – Apple **May 2023 – Aug 2023**

Implemented a distributed training process for TensorFlow ranking model used in Apple Maps Search platform. Improved data generation and processing efficiency by 64%. Built feature engineering jobs in Spark.

Software Engineer – Cisco WebEx **Feb 2022 – Aug 2022**

Handled customer cases by debugging meeting issues and deploying fixes. I also improved meeting features and mentored incoming summer interns. I trained coworkers in different teams on how to develop an internal debugging tool.

Research Assistant – Purdue University **May 2021 – Feb 2022**

RA in Professor Suresh Jagannathan's Lab@Purdue University. The focus of the lab lies in reinforcement learning, concurrent and distributed systems, and formal methods for describing and implementing high-level programming languages.

Software Engineer Intern – Cisco WebEx **June – Aug 2021**

Improved the internal logging and debugging tool for WebEx meetings which displays meeting records. I implemented a filtering feature on top of existing code and revised flow design to improve memory bottlenecks for large meeting records.

Software Engineer, Summer Intern – Promega Corporation **June – Aug 2020**

Designed and developed a scheduling system for the COVID-19 testing machine. Built a generic scheduling library to be used in the cloud backend or embedded in the machine. Wrote libraries in C# .NET, with 100% unit-test coverage, and integrated it with the UI.

Research Papers – Google Scholar

1. [WIP] **I. Agarwal**, Q. Zhou, H. Tong: Active Graph Anomaly Detection using Bi-Level Optimization
2. Y. Ban, **I. Agarwal**, H. Tong: Neural Active Learning: Online Learning Meets Multi-Armed Bandits[Submitted to ICLR 2024]
3. Q. Zhou, K. Daize, Z. Liu, **I. Agarwal**, H. Tong: Closed-Loop NAD: Recent Advances and Future Trends [Submitted to SDM '24]
4. **I. Agarwal**, P. Kargupta, B. Jin, A. Joshi: Generative Transformers for Diverse Text Generation (2023)
5. **I. Agarwal**, S. Sehgal, V. Goyal, P. Sonawane: QuickAns – a Virtual Teaching Assistant (2023) [Submitted to AI-ML Systems 2023]
6. Z. Xiong, **I. Agarwal**, S. Jagannathan: HiSaRL: A Hierarchical Framework for Safe Reinforcement Learning. SafeAI. AAAI (2021)