Ananth Shreekumar

Graduate Student, Department of Computer Science
Purdue University, West Lafayette, IN, USA

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Education

Master of Science in Computer Science **Expected Dec 2023**
Purdue University *West Lafayette, IN, USA*
- GPA : 4.0 / 4.0

Integrated Master of Technology in Computer Science and Engineering **Jul 2021**
International Institute of Information Technology Bangalore *Bangalore, India*
- 5 year Bachelor's + Master's program, GPA : 3.92 / 4.0

Experience

Purdue University **Aug 2022 - May 2023**
Graduate Teaching Assistant *West Lafayette, IN, USA*
- CS 352 Compilers: Principles and Practice. Spring 2023. Held weekly lab sessions, graded exams.
- MA 165 Calculus I. Fall 2022. Held weekly recitation classes for over 100 students.

American Express **Aug 2021 - Dec 2021**
Software Engineer, Enterprise Architecture Team *Bangalore, India*
- Integrated machine learning capabilities to internal logging, monitoring, and observability framework to detect anomalous behavior.
- Implemented a pipeline to perform automated log analysis on real-time log data collected from various internal systems using Logstash, Elastic Search, and Kibana.

Siemens Healthineers **Jan 2021 - Jul 2021**
Technical Intern, Center for Innovation in Diagnostics Team *Bangalore, India*
- Designed a pipeline to predict Sepsis onset in ICU patients using deep learning, specifically LSTMs on data collected from bedside measurements.
- Model performance exceeded 87% on accuracy, F1-score, specificity, and sensitivity metrics.

Technical Skills

Programming Languages : Python · C++ · C · Java
Tools : Git · GitHub · SQL · Linux · Shell scripting · Docker · Jenkins · Conda
Data Science and ML : Pytorch · Tensorflow · Scikit-Learn · Pandas · Numpy · Jupyter Notebook

Selected Academic Projects

Compiler for a variant of C
- 6 projects culminating in a fully functional compiler for a variant of the C language.
- Built using C++ and the LLVM framework.
- Included syntax and semantic analysis, intermediate code generation, and register allocation.

Reinforcement Learning to play the Snake game
- Learning using tabular methods and Q function approximation using deep neural networks.
- Implemented Double DQN and priority sampling to improve training by learning faster.
- Experimented with various input spaces, such as raw RGB pixel values of the game screen and game state encoded as a matrix.

Relevant Coursework

Algorithms	Database Systems	Compilers	Operating Systems
Machine Learning	Reinforcement Learning	Computer Networks	Software Engineering