Ananth Shreekumar

Graduate Student, Department of Computer Science
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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

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 from logs.
- 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.
- This work is in submission at relevant journals.

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.

Technical Skills

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

Selected Academic Projects

Compiler for a variant of C **Jan 2022 - May 2022**
- 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.

Column Store Database **Jan 2020 - May 2020**
- Developed a column store database from scratch with a focus on data definition and schema parsing.
- Implemented a schema in XMLSchema and a parser in C++ for validating relational schemas.
- Query processor supported select queries with filtering, projection, joins, and aggregations.

Bargaining Agent for E-Commerce **Aug 2019 - Dec 2019**
- Designed an E-Commerce Agent that has the ability to bargain with a user by offering discounts, recommending product bundles, and evaluating counter-offers made by the user.
- Featured in a technology.org article.
- Work published at the Intelligent Virtual Agents conference IVA'20. doi: 10.1145/3383652.3423865

Relevant Coursework

Core CS : Algorithms · Operating Systems · Compilers · Database Systems · Software Engineering
AI & ML : Machine Learning · Deep Learning · Reinforcement Learning · Computer Vision
Math : Probability Theory · Discrete Mathematics · Calculus · Linear Algebra · Convex Optimization