# 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 logging and monitoring framework to detect anomalies from logs.
- Implemented a pipeline to perform automated log analysis on real-time log data.
- Utilized:  Python · Anomaly Detection Toolkit · Logstash · Elastic Search · 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 from bedside measurements using deep learning.
- Model performance exceeded 87% on accuracy, F1-score, specificity, and sensitivity metrics.
- Utilized:  Python · Tensorflow · Numpy · Pandas · Matplotlib

**Purdue University**  **Aug 2022 - Present**
*Graduate Teaching Assistant*  *West Lafayette, IN, USA*
- Dev GTA. Fall 2023. Creating assignments and projects for courses.
- 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, office hours.

## 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

## 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.
- Included syntax and semantic analysis, intermediate code generation, and register allocation.
- Utilized:  C++ · LLVM · GDB · Git

**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.
- Utilized:  C++ · XML · Git · GitHub

**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 · Compilers · Databases · Software Engineering · Networks · Cloud Computing · Security
**AI & ML** :  Machine Learning · Deep Learning · Reinforcement Learning · Computer Vision
**Math** :  Probability Theory · Discrete Mathematics · Calculus · Linear Algebra · Convex Optimization