Ananth Shreekumar

ananthshreekumar@gmail.com • (+91) 88848 55983

Education

Integrated Master of Technology in Computer Science and Engineering — Aug 2016 - Present

International Institute of Information Technology Bangalore

- Bachelor's + Master's degrees, Current CGPA : **3.91 / 4.0**
- Integrated 5 year program, Expected Graduation : **July, 2021**

Research Experience

Privacy-Aware Dynamic Access Control Mechanism for Electronic Health Records — Sep 2020 - Present

Prof. T K Srikanth

- Consent-based data-sharing of e-health data constrained by purpose and activity.
- Implementation of a prototype that supports privacy preserving operations in a distributed healthcare ecosystem.

A Bargaining Agent for E-Commerce — Aug 2019 - Dec 2019

Prof. Shrisha Rao

- Implementation of an E-Commerce Agent that has the ability to bargain with a user.
- Invloves offering discounts, recommending product bundles, and evaluating counter-offers made by the user.
- Work accepted as a full paper at the 20th ACM International Conference on Intelligent Virtual Agents (IVA'20).

Open Set Recognition Methods for Microscopic Urinalysis — Jan 2019 - Jul 2019

Prof. G N Srinivasa Prasanna

- Open Set Recognition methods that accurately classify in-class samples and reject out-of-class samples.
- Implemented the Openmax technique to the problem.
- Created a novel approach that increased rejection accuracy by 10% while maintaining positive class accuracy at 85%.
- Work included in a paper at the Medical Imaging meets NeurIPS 2019 workshop, 33rd Conference on NeurIPS.

Publications

- Ananth Shreekumar, Biswesh Mohapatra, and Shrisha Rao. 2020. Incorporating Autonomous Bargaining Capabilities into E-Commerce Systems. In *Proceedings of the 20th ACM International Conference on Intelligent Virtual Agents (IVA '20)*. Association for Computing Machinery, NY, USA, Article 51, 1–8. DOI:https://doi.org/10.1145/3383652.3423865
- Tarun Dutt, G.N.S. Prasanna, T.R. Dastidar, and Ananth Shreekumar. 2019. Towards Artifact Rejection in Microscopic Urinalysis. In *Medical Imaging meets NeurIPS 2019 workshop, 33rd Conference on Neural Information Processing Systems*. Vancouver, Canada. [pdf]

Positions of Responsibility

Student Ambassador — Sep 2020 - Present

International Institute of Information Technology Bangalore

- Promoted my institute on official channels as well as on social media.
- Provided support, encouragement and advice to prospective students.

Teaching Assistant — Aug 2019 - Dec 2019

Mathematics for Machine Learning — Prof. Amit Chattopadhyay

- Responsibilities included handling tutorial classes, problem solving sessions, and evaluating answer scripts.

PRESENTATIONS & WORKSHOPS

20th ACM International Conference on Intelligent Virtual Agents OCT 2020

ACM

- Oral and poster presentations of our paper *Incorporating Autonomous Bargaining Capabilities into E-Commerce Systems*.

Global Leader Experience, Bangalore DEC 2019

Common Purpose

- Week-long program designed to build leadership and team working skills and to develop Cultural Intelligence.
- Worked with students of **King's Business School, London** to propose a novel solution for the waste disposal problem.

SELECTED PROJECTS

The Mapper Algorithm • Code MAR 2020 - APR 2020

CS/DS 815 - Topological Data Analysis — Prof. Amit Chattopadhyay

- Implemented the Mapper algorithm from Computational Topology.
- Involves dimensionality-reduction that requires implementing a variable number of loops.

A Column Store Database • Code APR 2020 - MAY 2020

DS 603 - Data Modeling — Prof. Chandrashekar Ramanathan

- Implemented a schema in XMLSchema for Relational Database schemas at a meta-meta-data level.
- Implemented classes that parse an XML instance and create required tables, views and add appropriate constraints.

Algorithms in Reinforcement Learning • Code JUN 2020

Personal Project

- Read research papers in RL and implemented Rainbow DQN and Experience Replay Buffer out of interest in the domain.
- Used the OpenAI-Gym environments to validate my algorithms and implemented an environment for the Snake game.

Toxic Comments Classification • Report SEP 2018 - NOV 2018

GEN 511 - Machine Learning course — Prof. G Srinivasaraghavan

- Multi-label machine learning classifier that can classify comments found online into multiple classes of vituperation.
- Training included various Machine Learning methods and their ensembles, and blending and stacking.

ACHIEVEMENTS

Member of the Dean's Merit List at IIIT-Bangalore for outstanding academic performance. 2016 - PRESENT

All India IIT-JEE Main Examination - 99.39 percentile. 2016

Karnataka State Common Entrance Test - 99.99 percentile. 2016

TECHNICAL SKILLS

Programming Languages : Python • C++ • C

Data Science : Pytorch • Scikit-Learn • Tensorflow • Keras

Tools : Git • Jenkins • Docker • GNUPlot • LaTeX

Others : SQL • XML • Linux

TEST SCORES

GRE : Verbal : 160 / 170, Quantitative : 168 / 170, Analytical Writing : 5.0 / 6.0

TOEFL : Overall : 115 / 120 - Reading : 30 / 30, Listening : 29 / 30, Speaking : 28 / 30, Writing : 28 / 30