

ANANTH SHREEKUMAR

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EDUCATION

Integrated Master of Technology - Computer Science

AUG 2016 - PRESENT

INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY - BANGALORE (IIIT-B)

- 8th Semester Student, CGPA : 3.9 / 4.0
- 5 year program, Expected Graduation : July, 2021
- Targeting a specialization in Data Science

[\[TRANSCRIPT\]](#)

EXPERIENCE

Research Intern - Open Set Recognition Methods for Microscopic Urinalysis

JAN 2019 - JUL 2019

COMPUTATIONAL SCIENCES LABORATORY - IIIT-B

PROF. G N SRINIVASA PRASANNA

- Open Set Recognition methods that accurately classify in-class (positive) samples and reject out-of-class samples.
- Implementation of the existing technique OpenMax as an application to this dataset.
- Created a novel approach that increased rejection accuracy by 10% while maintaining positive class accuracy at 85%.
- Co-authored a paper that was accepted at **Medical Imaging meets NeurIPS 2019** workshop, 33rd Conference on NeurIPS.

Teaching Assistant

AUG 2019 - DEC 2019

MATHEMATICS FOR MACHINE LEARNING - IIIT-B

- Responsibilities included handling tutorial classes, problem solving sessions and exam paper evaluation.

PUBLICATIONS

- T. Dutt, G.N.S. Prasanna, T.R. Dastidar and Ananth Shreekumar. "Towards Artifact Rejection in Microscopic Urinalysis". Medical Imaging meets NeurIPS 2019 workshop, 33rd Conference on Neural Information Processing Systems. [\[PDF\]](#)

PROJECTS

E-Commerce Bargaining Agent

AUG 2019 - JAN 2019

7TH SEMESTER - ARTIFICIAL INTELLIGENCE COURSE

PROF. SHRISHA RAO

- Implementation of an E-Commerce Agent that will ultimately have the ability to bargain with a user by offering discounts and recommending product bundles, while also being able to evaluate counter-offers made by the user.
- Evaluate offers using the Thomas-Kilmann Conflict Mode instrument and propose counter-offers using the BOA Model.

Mapper - Topological Data Analysis

MAR 2020 - APR 2020

8TH SEMESTER - COMPUTATIONAL TOPOLOGY COURSE

PROF. AMIT CHATTOPADHYAY

- Implemented the Mapper algorithm from Topological Data Analysis.
- Involves dimensionality-reduction that requires implementing a variable number of loops, which is solved by recursion.

[🔗](#) [CODE](#)

A Column Store database

APR 2020 - MAY 2020

8TH SEMESTER - DATA MODELING COURSE

PROF. CHANDRASHEKAR RAMANATHAN

- Implemented a schema in XMLSchema for Relational Database schemas. This required working at a meta-meta-data level.
- Implemented Schema Extractor and Schema Loader classes, that parse an XML instance of the above XMLSchema and create required Tables, Views and add the appropriate Entity-Integrity Constraints and Referential Integrity Constraints.

[🔗](#) [CODE](#)

Bangalore Metropolitan Transport Corporation - Cost Minimization

JAN 2018 - MAR 2018

PROJECT INTERN - IIIT-B

PROF. V N MURALIDHARA

- Optimization of the Bangalore Metropolitan Transport Corporation bus schedule to minimize their cost of operation.
- Cost was calculated using the salaries of various worker roles and time spent on duty.
- Constraints included a time table and the number of buses along a route.

MINI PROJECTS

Toxic Comments Classification

SEP 2018 - NOV 2018

5TH SEMESTER - 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.

 [REPORT](#)

English to Japanese Transliteration

JAN 2020

8TH SEMESTER - NATURAL LANGUAGE PROCESSING COURSE

PROF. G SRINIVASARAGHAVAN

- Convert Japanese written in English to Japanese written in ひらがな.
- Developed the algorithm for transliteration using the Unicode text standard.

 [CODE](#)

Simple As Possible - 1 Computer

APR 2017

2ND SEMESTER - DIGITAL DESIGN COURSE

PROF. SUBAJIT SEN

- Built the Simple As Possible - 1 Computer in Verilog.

 [CODE](#)

TECHNICAL SKILLS

Programming Languages : Python • C++ • C

Tools : Git • Jenkins • Docker • \LaTeX

Data Science : Numpy • Scikit-Learn • Tensorflow • Keras • Matplotlib

Others : SQL • XML • Linux • MS Excel

EXTRA-CURRICULARS

Global Leader Experience, Bangalore

DEC, 2019

CONDUCTED BY COMMON PURPOSE

- Week-long program designed to build leadership and team working skills and to develop Cultural Intelligence.
- The theme: "How do you ensure that technological innovation provides economic as well as social value in cities?"
- Worked with students from **King's Business School, London** to provide a solution for a complex problem in Bangalore.

COURSE WORK

Theory and Systems : Data Structures and Algorithms • Automata Theory and Computability • Operating Systems • Database Systems • Programming Languages • Software Engineering

Data Science and AI : Machine Learning • Automatic Speech Recognition • Visual Recognition • Artificial Intelligence • Reinforcement Learning • Natural Language Processing

Mathematics : Linear Algebra • Convex Optimization • Discrete Mathematics • Probability Theory

Others : Digital Design • Signals and Systems • Computer Architecture • Computer Networks

MOOC : Machine Learning by Dr. Andrew Ng on Coursera.

ACHIEVEMENTS

Selected for **Dean's Merit List** at IIIT-B for three consecutive years for academic excellence

2017 - 2019

Received **Merit Scholarship** at IIIT-B for three consecutive years

2017 - 2019

All India **IIT-JEE Main** Examination - Scored in the 99th percentile

2016

Karnataka State **Common Entrance Test** - Rank 98 / approx. 120,000 candidates

2016

HOBBIES AND INTERESTS

日本語 (Japanese)

Learning Japanese using the Genki Textbooks and Anki App. Currently able to read and write ひらがな and カタカナ, trying to pick up 漢字.

Table Tennis

Participated in many local and inter-school tournaments.