Akhil Krishna Mohan

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⌨ https://www.github.com/nimberledge
in LinkedIn Profile
Last updated on: June 1, 2021.

EDUCATION

2017 - 2021	**B.Sc Mathematics & Computer Science**
	University of Illinois Urbana-Champaign
2021 - 2022	**M.Sc Applied Computational Science & Engineering**
	Department of Earth Sciences and Engineering
	Imperial College London

PROJECTS

Junto

Worked with Prof. Mariana Silva to build a tool to allot senior design teams for final year students based on student preference. Implemented a genetic algorithm to solve the maximization problem, and made the program accessible by building a web-app. Researched, optimized, and parallelized a backend server capable of efficient processing. Authored a paper to document the efficacy of the approach used.

GAIME

Led a team to develop a system of generalized board game AI, via a library of functions that allows a user to make games and add AI with minimal effort. Researched, studied, modified, and implemented several AI algorithms such as Minimax (with alpha-beta pruning) and Monte Carlo Tree Search.

RESEARCH

PUBLICATION	*Introducing* junto, *a Web Tool to Build Project Teams based on a Bidding Strategy* American Society for Engineering Education 2020
POSTER	PURE Research Symposium University of Illinois, May 2018

TECHNICAL SKILLS

LANGUAGES	Python, C, C++, Java, Bash NodeJS, Julia, LaTeX
LIBRARIES	matplotlib, graphviz, scipy, numpy Flask, ExpressJs, OpenFrameworks, Sequelize, Cython, multiprocessing, SpaCy, TextBlob, nltk, manim
SOFTWARE	Linux, Docker, MySQL, Excel, Apache Hadoop, Solr, Spark, Hive

RELEVANT COURSEWORK

Abstract Linear Algebra	Probability Theory
Numerical Analysis	Differential Equations
Discrete Mathematics	Real Analysis
Graph Theory	Number Theory
Data Structures	Advanced Algorithms
Computer Architecture	Systems Programming
Artificial Intelligence	Compiler Design

WORK EXPERIENCE

JUNE 2019 – AUG 2019

Waterline Data
Software Engineering Intern

Working with a Machine Learning-based data catalog, to manage and process big data. Creating a fast, robust query engine for the said software. Workflow optimization and parallelization. Creating additional visualization tools for data in the catalog.

JAN 2018 – DEC 2020

University of Illinois
Course Assistant

Developing educational content for courses in Introductory Programming, Software Design, Numerical Methods. Working one-on-one with students to communicate technical and theoretical topics. Leading weekly code review sessions, allowing students to write industry-standard code.

MAY 2017 – AUG 2017

SM Netserv Technologies
Language Processing (NLP) Researcher/Developer

Using Machine Learning methods to link sentences by subject matter. Scraping and sanitizing social media text data (Facebook, Twitter, etc). Designing and creating a sentiment engine for review data based on a Valence Aware Dictionary (VADER).

ADDITIONAL INFORMATION

LANGUAGES	English, Hindi, Tamil
CREATIVITY	Self-taught pianist, guitarist, and bassist
AWARDS	Dean's List - University of Illinois Spring 2020
LEADERSHIP	Project head - GAIME (2017-2018)

REFERENCES

NAME	**Mariana Silva**
POSITION	Teaching Assistant Professor University of Illinois
EMAIL	mfsilva@illinois.edu
NAME	**Wade Fagen-Ulmschneider**
POSITION	Teaching Associate Professor University of Illinois
EMAIL	waf@illinois.edu
NAME	**Salil Datta**
POSITION	Director of Development Waterline Data
EMAIL	sdatta@waterlinedata.com