Mohamed Amn

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EDUCATION

UIUC
BS Computer Science + Music
Dec 2021 | Urbana, IL
Edmund J. James Scholar
Deans List Every Semester
GPA: 3.97 / 4.0

LINKS

Portfolio:// **mamn2.github.io**
Github:// **mamn2**
LinkedIn:// **mohamedamn**

COURSEWORK

CURRENT
Data Structures
Computer Architecture
Computation and Music I
Computer Music
Piano Technology

UPCOMING SPRING
Algorithms/Models of Computation
Audio Computing Laboratory
Linear Algebra
Computation and Music II

COMPLETED
Discrete Structures
Software Design Studio
Statistical Analysis
Music Theory I & II
Aural Skills I & II
Programming Pedagogy
Intro to Computer Science
Microeconomics

SKILLS

PROGRAMMING
Very Experienced:
C++ • Java • Python • JUCE
Experienced:
C • React JS • Javascript • HTML •
Verilog • MIPS
Familiar:
Objective-C • TensorFlow • Android •
R Studio

LANGUAGE
English (Native) • Italian (Intermediate)
• Spanish (Basic)

EXPERIENCE

UIUC DEP. OF PLANT BIOLOGY | Software Research Intern
May 2019 - Present | Urbana, IL
- Created a plant classification system using machine learning techniques in Python and C++ for collecting climate data to be included in IPCC Climate Report. Imagery and spectral data is recorded with drones, which is then used for the classification system.
- Helped debug a C++-based climate modeling system to improve the representation of surface water dynamics in the next IPCC climate report.

UIUC DEP. OF COMPUTER SCIENCE | Course Assistant
Jan 2019 – May 2019 | Urbana, IL
- Helped lead sections in office hours and lab for beginner students. This experience strongly strengthened my foundations in OOP.

PROJECTS

PLANT CLASSIFIER | Machine Learning - Python/CPP
May 2019 – Present
Plant classification using machine learning / computer vision techniques in TensorFlow and Keras. Also uses a Naïve Bayes classifier which is fed hyper-spectral data in favor of images.

DELAY VST | DSP in JUCE (CPP)
April - May 2019
Created a VST plugin which processes audio data and uses it to create distortion, delay, and reverb affects using DSP algorithms.

NAÏVE BAYES TEXT CLASSIFICATION | Bayesian Statistics in CPP
April 2019
Wrote a text classification system from scratch in C++ that learns from handwritten letters. Uses a Naïve Bayes algorithm to correctly classify text using probability modeling and machine learning.

CLASSICAL PIANO LIBRARY | Mobile Dev in Android (Java)
December 2018
Developed an Android app that implements the Spotify Android SDK to create a database of classical piano repertoire.

SUDOKU SOLVER | Backtracking Algorithms in CPP
March 2019
Create a command line application that immediately solves sudoku puzzles using backtracking algorithms. Can solve a sudoku puzzle in under 1 second.

AWARDS

2017	ISBA Mock Trial Top State Witness Award
2016	ISBA Mock Trial Top State Attorney Award
2015	ICTM State Math Competition Top 50 Freshmen