

Joshua Dunkley

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Education

MIDDLE TENNESSEE STATE UNIVERSITY

Murfreesboro, TN

M.S., Computer Science. 4.00

May 2022

Relevant Coursework: Software Engineering, Intro to AI, Deep Learning, Analysis of Algorithms, Database Management Systems, Database Security

UNIVERSITY OF TENNESSEE, KNOXVILLE

Knoxville, TN

B.S., Computer Science. 3.94

May 2020

Relevant Coursework: Software Engineering, Systems Programming, Programming Languages & Systems, Intro to Machine Learning, Databases & Scripting Languages, Matrix Algebra

Experience

MIDDLE TENNESSEE STATE UNIVERSITY

Murfreesboro, TN

Graduate Teaching Assistant

Jan 2021 – Present

Assists professor in Systems Programming course through grading of student projects and re-teaching of systems concepts taught in class.

HUNTINGTON LEARNING CENTER

Murfreesboro, TN

ACT STEM Tutor

Jul 2020 – Present

Designs lesson plans for various math subjects (i.e., Arithmetic, Algebra, Geometry, Statistic, Trigonometry) and science subjects to help high school students learn the necessary content and best test-taking strategies for the ACT.

Research

UNIVERSITY OF TENNESSEE

Knoxville, TN

Undergraduate Researcher

Aug 2019 – Mar 2020

Implemented a GUI using Qt and Python to visualize and process real-time time-series data with application to brain-computer interfaces. Created a signal processing tool to allow users to apply low-pass, high-pass, and band-pass filters on real-time time-series data.

Projects

ASSET MANAGEMENT SYSTEM

Created an Angular application in the cloud (AWS) that tracked and maintained a record of assets within a company. Designed the database schema on an AWS EC2 instance in MySQL, created AWS lambda functions in TypeScript using the AWS CDK, created a web API with an HTTP endpoint for lambda functions by using AWS API Gateway, and designed Angular components to make API calls to AWS lambda functions.

PATH PLANNING VISUALIZATION

Created an application using PyGame that allows users to visualize two path planning algorithms: A* and wavefront. Implemented an interactive environment that allows users to add obstacles to a world grid to visualize how path planning works under various constraints.

Leadership & Activities

CAPSTONE PROJECT

Murfreesboro, TN

Team Lead

Aug 2021 – Dec 2021

Organized and led group meetings, logged team discussions and decisions, communicated with business clients to keep track of business requirements, and delegated tasks to teammates for capstone project.

Skills & Interests

Skills: Python (Numpy, Keras, Scikit-Learn), HTML/CSS, JavaScript (Angular), SQL (MySQL, MSSQL), C, AWS, Git

Software: MSSQL Server, MySQL WorkBench, PyCharm, VSCode, Jupyter Notebook, Apache NetBeans

Interests: Jigsaw puzzles, Crosswords, Reading, Board/Card games, Cooking, Hiking, Machine/Deep Learning