Keshav Santhanam

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EDUCATION

The University of Texas at Dallas   Aug. 2024 – May 2025
Masters of Science in Computer Science   *Richardson, TX*

The University of Texas at Dallas   Aug. 2021 – May 2024
Bachelors of Science in Computer Science, GPA: 3.784 (Computing Scholars Honors)   *Richardson, TX*

PROJECTS

KNN Clustering Via EM On Gaussians | *Python, NumPy, pandas, Git*   Nov. 2023
- Developed a clustering algorithm that implements from scratch the expectation-maximization algorithm in order to probabilistically assign input data to "k" (user-specified) unique Gaussian distributions

Backpropagation With Multi-Layer Biases | *Python, NumPy, pandas, Git*   Oct. 2023
- Developed and implemented a deep neural network learning model from scratch using Python (libraries used were NumPy and pandas) to find non-linear models using a sigmoid (logistic) activation function

Multithreaded Hashing | *C, Git*   Sep. 2022 – Oct. 2022
- Developed program in C using multithreading to find unique and deterministic (i.e. replicable) hash values for specified input files and tested using UNIX terminal in MobaXterm
- Used Mutex locks to guarantee consistency of results (determinism)
- Stores hash values as a binary tree and combines them by rehashing from leaf nodes up to the root

I Owe You (IOU) | *React Native, Google Firebase, Git*   Jan. 2022 – May 2022
- Won 2nd Place among all ACM Projects submissions at UT Dallas for Spring 2022
- Worked as a full-stack developer in React Native to develop a financial transactions app to share and manage group transactions for bill-splitting

SELECTED COURSEWORK

Current: **Artificial Intelligence, Natural Language Processing, Undergraduate Research, Capstone Project**
Prior: **Machine Learning, Advanced Algorithms, Probability and Statistics, Computer Networks, Systems Programming in UNIX Environments, Software Engineering, Discrete Math I and II, Automata Theory**

WORK EXPERIENCE

Resident Advisor   Aug. 2022 – Present
University Housing at The University of Texas at Dallas   *Richardson, TX*
- Engaged with and informed residents in my building
- Hosted on-campus events for members of the housing community
- Performed rounds to check for compliance with University Housing rules and regulations

EXTRACURRICULAR ACTIVITIES

Vice President of Analytics, The Big Data Club   Sep. 2021 – Present
The University of Texas at Dallas   *Richardson, TX*
- Contacted corporations and other groups to raise funds for speaker events, industry panels, and workshops
- Organized industry and academic collaborations to increase interest in Big Data on campus

TECHNICAL SKILLS

Languages: Python, C/C++, Java, React Native, JavaScript, SQL, HTML/CSS, MIPS32, Bash, Verilog
Libraries/Frameworks: PyTorch, TensorFlow, Keras, scikit-learn, NumPy, pandas, Matplotlib, STL (C++)
Developer Tools: Git, Jupyter Notebooks, Google Firebase, Figma
Operating Systems: Windows, UNIX