

# Lalith Chandril Reddy Mannem

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## EDUCATION

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### Arizona State University

Aug 2021 – May 2023

*Master's in Computer Engineering - GPA: 3.8/4.0*

*Tempe, USA*

- **Relevant Coursework:** Foundations of Algorithms, Artificial Intelligence, Statistical Machine Learning, Probability and Random Processes, Data Processing at Scale, Mobile Computing

### Osmania University

Aug 2016 – Nov 2020

*Bachelor's in Electrical and Electronics Engineering - GPA: 3.7/4.0*

*Hyderabad, India*

- **Relevant Coursework:** C - programming, Intro to Data Structures and Algorithms, Digital Signal Processing and Embedded Systems, Statistical Methods, Microprocessor and Microcontrollers

## SKILLS

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**Front-end:** HTML 5, CSS 3, Javascript, Typescript, Swift, C#

**Backend & Databases:** Python 3, SQL, PHP, Java, C/C++, Microsoft SQL, Oracle, MongoDB

**Frameworks & Technologies:** React, Bootstrap, Vue.js, AngularJS, Django, RESTful APIs, ASP.NET, Flask

**Platforms:** AWS, Azure, Google Cloud Platform, Linux, Docker, Kubernetes, Node.js, Tableau, GIT, Visual Studio

## PROJECTS

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### Path-finding Visualizer | *HTML 5, CSS 3, JavaScript, React, Amazon EC2*

- Led a team of 5 in building a React application for visualizing path-finding between two distinct nodes
- Developed a Unique algorithm, more precisely a mixture of Dijkstra's and A\* Algorithm, which is faster than eight existing path-finding Algorithms and, on top of that, carried out a Recursive Division Maze Generation algorithm

### Speech Emotion Recognition | *Python, TensorFlow, librosa, pandas, Matplotlib*

- Executed a real-time model which recognizes seven different emotions in a voice
- Collected, labeled, and extracted six features from the audio samples using MFCC, Chroma, and LPC techniques
- Trained through 5+ distinct models such as Random Forest, KNN, and MLP. The best Accuracy of 87% is with MLP Neural Network

### Real-time Multi Person 2D Pose Estimation | *Python, OpenCV, Microsoft Cognitive Toolkit*

- Enabled a model which predicts the 2D pose of 50+ people in a frame using a Convolutional neural network
- Implemented non-parametric representation to learn to associate body parts with individuals in the image, which increased the accuracy by 35%

### Tetris AI | *Python*

- Collaborated Deep reinforcement learning with Python and Incorporated four different algorithms, including Genetic and Expectimax, to train an AI agent to play the Tetris game that reached a record score of 1500+
- Improved the performance by 30% by using transfer learning from a heuristic model

### Corporate Internet Banking Application | *Python, HTML 5, CSS 3, Typescript, Bootstrap, MySQL*

- Pioneered in gathering requirements, system analysis, design, development, testing, and deployment
- Designed user interface and navigation structure and administered client-side validations and presentation layer
- For Manipulation of data from the database, written queries in SQL and created a database using MySQL

## EXPERIENCE

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### University Teaching Assistant (Data Structures and Algorithms)

Nov 2021 – Present

*Arizona State University*

*Tempe, USA*

- Designed assignments, exams and Conducted regular doubt clarification office hours for 950+ students
- Taught classes with 300+ students on Linked list, Trees, and Algorithmic techniques including Greedy, Network Flow, and Dynamic Programming

## INTERESTS

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Teaching . Hackathons . Geopolitics . Crypto . Equity . NFTs . Web3