

Saurabh Mylavaram

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EDUCATION

University of Minnesota - Twin Cities	<i>Minneapolis, MN</i>	Sept 2019 - May 2021
<i>Master of Science in Computer Science</i>	<i>TA: Intro to AI, Web programming</i>	<i>GPA: 4.0 / 4.0</i>
Indian Institute of Technology - Delhi	<i>New Delhi, India</i>	July 2013 - May 2017
<i>B.Tech. in Electrical Engineering</i>		

EXPERIENCE

Dell EMC Corporation - Graduate Intern	Remote (Austin, TX)	June 2020 - July 2020
<ul style="list-style-type: none">Built automation workflows to collect network, system performance stats from servers. (Python, VBA)Our system led to the discovery of an existing fatal problem in one model of switches.Learned the architecture of server chassis and mastered their automation platform (Axon) within 2mos.		
Samsung Research - Software Engineer	Delhi, India	July 2017 - July 2019
<ul style="list-style-type: none">Built web crawlers and parsers in Java. Proposed a new crawler to improve price collection by 2x.Built Vue JS, Bootstrap frontend with CRUD operations for hundreds of tasks using REST apis.Initiative to reduce storage costs by moving processed data from <i>ElasticSearch</i> to <i>S3</i>. (Python)Built Lambda tasks for a new domain after proactively learning AWS services (<i>Athena</i>, <i>Cloudwatch</i>)		
Citibank Services India Ltd. - Summer Intern	Pune, India	May 2016 - June 2016
<ul style="list-style-type: none">Built a full-stack web application to track project status in the organization.Learned Node, Express, Angular and MongoDB stack starting from no experience.Released the app and incorporated evolving user requirements in an Agile fashion.		

PROJECTS

Path planning and Collision avoidance	video website	(Java, Processing)	March 2020
<ul style="list-style-type: none">Implemented motion planning for crowds of agents to navigate a map with obstacles in > 40 fps.Experimented with A-star, 3D RRT for planning and time-to-collision, boids for collision avoidance.			
Physics-based game animations	video website	(Java, Processing)	February 2020
<ul style="list-style-type: none">Built realistic looking cloth using a grid of nodes acted on by spring forces, gravity and air drag.Built 2D water waves using a grid of water columns acted on by forces from shallow water equations.Wrote our own vector math library, and implemented numerical integrations to render at > 30 fps.			
Replicated Bank Server Application	github	(Java RMI)	Spring 2021
<ul style="list-style-type: none">Created a group of server processes performing total-ordered operations, just using Lamport clocks.Many distributed multithreaded clients can all only see a consistent state machine model.			
Distributed Hash Table	github	(Java RMI)	April 2021
<ul style="list-style-type: none">Built a dictionary storage server using the Chord P2P protocol using Java RMI for communication.			
Machine Learning algorithms	github links	(Python, MNIST, Breast-Cancer)	Fall 2020
<ul style="list-style-type: none">Implemented Logistic Regression, Naive Bayes, SVM, Neural Networks, CNNs, Random Forests.Compared de-biasing methods using fairness metrics like demographic parity and equal opportunity.			
AI Agent to play Super Mario	github	(PyTorch, Python)	April 2021
<ul style="list-style-type: none">Implemented Deep Q-learning and Actor-Critic models to learn the game using reinforcement learning.Successfully completed the first level of the game with 4 hours of training.			

SKILLS

Languages: **Java** • **Python** • **C++** • **Javascript** • **Node** • **Matlab** • **SQL** • **Processing**

Web Development: **HTML** • **CSS** • **Vue** • **React** • **Angular** • **Spring** • **Bootstrap** • **Django** • **REST API**

Others: **PyTorch** • **MySQL** • **MongoDB** • **Latex** • **Git** • **Android App Dev** • **Linux** • **ElasticSearch** • **AWS**