# JAYITA MALIK

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## Education

**The University of Texas at Dallas** Aug. 2019 — May 2023
Bachelor of Science, Computer Science GPA: 3.8/4.0

- UTD Academic Excellence Scholarship (full tuition + stipend), School of Engineering Dean's List, Harvard College Undergraduate Research Association's National Collegiate Research Conference attendee
- Coursework: Data Structures and Algorithms, Probability and Statistics, C/C++ Programming in UNIX, Computer Architecture, Linear Algebra, Discrete Math I & II
- Activities: Artificial Intelligence Society, Society of Women Engineers, Engineers Without Borders

## Technical Skills

**Languages**: Java, C++, C, SQL, Bash, Python, JavaScript, HTML/CSS, R
**Developer Tools**: ReactJS, React Native, Linux, Git, Node.js, AWS, Tensorflow, Agile, Object-Oriented Design

## Experience

**Advanced Networks Research Lab** April 2021 – Present
Undergraduate Research Intern Dallas, TX

- Solved constrained nonlinear optimization problem for revenue maximization using Graph Neural Networks
- Developed optimal 5G Network slicing models using Deep Learning to maximize revenue for providers and motivate users to purchase Fog Nodes
- Assessed and maintained the Neural Network models under the supervision of Prof. Jason Jue

**The NorthCap University** March 2020 – August 2020
Student Researcher New Delhi, IND

- Researched and developed a C++ based IoT system to analyze human brainwaves for quantitative human psychology analysis under Prof. Naresh Kumari
- Published research in the International Journal of Advance Research and Innovation (ISSN: 2347 - 3258)

## Projects

**I'm So Hungry** | *Reverse Recipe Search App* May 2021

- Developed a mobile application that uses REST API to generate recipes from already available ingredients in the user's pantry. App is particularly useful in COVID-19 lockdowns
- Technologies Used: React Native, Axios, HTTP, Javascript, HTML/CSS

**TrackATruck** | *Geo-fencing enabled truck monitoring and tracking system* May 2021

- Developed a full-stack web application using relational database system to monitor real-time performance parameters such as engine heat, speed, fuel, ignition status and geo-location and alerts anomalies
- Technologies Used: Node RED, Node.js, MySQL, Javascript, Grafana, HTML/CSS

**Garbage Classifier** | *Neural Network enabled Garbage Classifier* March 2021

- A Machine Learning classification model that categorizes images of garbage into 6 categories and determines whether they are recyclable
- Technologies Used: Tensorflow, Python, Keras, OpenCV, Javascript, HTML/CSS

**Weather to Wear?** | *Clothing Recommendation App* December 2020

- Developed a mobile application that recommends outfit built from the user's personal inventory according to the weather and laundry availability
- Technologies Used: React Native, Firebase, Node.js, Javascript

**JayShell** | *Custom built Linux shell from scratch* October 2020

- Developed a custom Linux shell using C and Linux System Calls like fork, exec, pipe and dup2. Shell capable of processing both Linux and Windows commands, including pipes and re-direction of I/O
- Technologies Used: C, Linux, make, Signal Handling