# Don Wijesinghe

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## EDUCATION

**CISCO Networking Course** June 2023 – July 2023

**University of Texas at Dallas – Richardson, Texas** Aug 2021 – May 2023
Master of Science in Software Engineering GPA: 3.36
*Relevant coursework: Design and Analysis of Algorithms, Distributed Algorithms, DB Design, OO Software Engineering, ML*

**Midwestern State University – Wichita Falls, Texas** Aug 2016 – Aug 2020
Bachelor of Science in Mechanical Engineering, Minors in Computer Science and Mathematics GPA: 3.94
Honors: Summa Cum Laude | Pi Mu Epsilon Mathematics Honors
*Relevant coursework: Computational Theory, Data Structures and Algorithms, Calculus I – III, Linear Algebra*

## SKILLS

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| Languages: | Python, C, C++, JavaScript, TypeScript, CSS, HTML, SQL, R |
| Experience: | C++ Application Development, Full-Stack Development, Data Processing, Training and Tesing ML models |
| Tools: | SFML, Node.js, npm, Git, ESLint, React, Trello, Moqups, MySQL, MongoDB, GDB, Shell, Next.js, Express.js, AWS |
| Certifications: | CISCO Networking Course |

## PROFESSIONAL EXPERIENCE (more at wojiaodon.com/experience/)

**OTA Ventures - Dallas, TX** Dec 2022 – Jan 2023
Web Design & Development
• Designed the website for the company portolio using Moqups and implemented using Hostinger's native website builder which reduced the time to deploy by 33% and was successful in meeting client requirements.
• Provided client with the ability to manage all websites using one hosting platform by configuring the DNS server to reroute all companies' domains to Hostinger. This improved overall usability and led to a $90 reduction in monthy operational costs.
• Successfully relocated all company websites and established dedicated email services for both the client and company staff by configuring HTTP, SMTP, and POP application layer protocols. This implementation enhanced user-friendliness and centralized service management on a single platform, all accomplished with minimal downtime of 0.005%.

**University of Texas at Dallas - Richardson, TX** Aug 2020 – May 2021
Teaching Assistant
• Facilitated technical demonstrations in RStudio to design and develop LSTM, SVM, and CNN prediction models for 1-hour ahead, 6-hour ahead, and 24-hour weather forecasting, enhancing students' comprehension and practical abilities.
• Conducted qualitative training of the prediction models using K-folds Cross Validation to reduce overfitting, which resulted in an overall model accuracy of 93% (LSTM, measured by RMSE metric) and demonstrated the methodology to students, emphasizing the significance of model selection based on the type of data being analyzed.
• Automated grading students' prediction models by designing a Shell script to evalute student models, effectively reducing the overall task time by at least 70% which led to comfortably meeting the Professor's timeline.
• Conducted weekly Electronics course practical sessions by utilizing circuitry, signal wave generators, and other relevant equipment to complement the course teachings and made additional recommendations outside of the course documents, with the instructor's approval. These hands-on sessions actively engaged the students and as a result, the students developed a strong foundation in the course material, leading to 100% positive feedback through the UTD maintained feedback system.

## PROJECTS (posix multithreading, embedded systems, distributed systems projects and more at wojiaodon.com/projects)

**Airborne Hazard Evasion Mapping System - An Android Application.** Jan 2023 – May 2023
• Developed a mobile application that offers real-time navigation to steer clear of airborne hazards based on user sensitivities. The app utilizes Google Maps to display routes and a backend configured with OpenStreet Maps, supplemented with AirNow data for realtime updates, introducing a novel method to tackling the increase in air pollution exposure and its effects.
• Constructed a comprehensive solution architectural document by employing Krutchen's 4+1 view model and the respective UML diagrams. This document includes the final implementation model for the logical view, a component diagram for the developer, a white box sequence diagram for the process view/UCR, and a Deployment Diagram for system deployment. This resulted in minimal errors during production and significantly accelerated the application's development and testing process.
• Developed a graph weighting service for a directed acyclic graph by designing an algorithm that assigns positive weights based on distance and air pollution levels with a bias towards the latter, which led to an overall increase in performance of 20% by reducing the time cost of route optimization to O(ElogV) – using a min heap.

**Tamsquaredrealty - Lincoln, Nebraska - tamsquarerealty.com** Aug 2022 – March 2023
• Designed and built the front and backend utilizing Turborepo and Nginx for a web-based property management system which led to a 50% speed up in performance. This was for a client in Nebraska which received positive feedback and completely replaced his former system.
• Designed the frontend using Moqups getting client feedback while concurrently developing the approved features leading to faster output of the application.
• Utilized the Next.js framework to develop the Typescript-frontend, incorporating both Server-Side Rendering (SSR) and Static Site Generation (SSG) that enhanced the application's performance, resulting in a 20% improvement.
• Developed the Typescript-backend using Node.js, Express.js and MongoDB that successfully met the required usecases and the additional features of this application.