

# Mekin Jamal

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## SUMMARY

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- I am an **Electrical and Computer Engineering** at **Addis Ababa University** student with a strong passion for both **software(FullStack)** and **hardware development**. I specialize in smart **IoT projects** aimed at solving real-world problems, such as **my final graduation** project focused on addressing **drainage issues** in my country through innovative technology.
- Beyond academics, I am an active member of the **Robotics Club**, where I collaborate with my team to design, build, and program robots for the **VEX V5 competition**. Through this experience, I have developed strong skills in teamwork, innovation, and robotics technology. Our team won the African Championship, earning a **scholarship opportunity** to Texas.
- Additionally, I am actively involved in the foundation of **Amabalay Maps**, an Ethiopian **alternative to Google Maps**, where I contribute by leading and playing a key role in the frontend development team..

## EDUCATION

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**Addis Ababa Institute of Technology** – Addis Ababa, Ethiopia  
*Bachelor of Science in Electrical and Computer Engineering*

**April 2021 – Present**

## WORK EXPERIENCE

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**Google Developer Group (GDG) –Both (remote and in person)**  
**React Module Instructor** | **March 2025 – Present**

- Deliver engaging **React.js** training sessions to aspiring developers as part of the **Google Developer Group program** at **Innovation center, AAiT**.
  - Designed and taught **React** fundamentals, including **components, hooks, state management**, and **API integration**.
  - Mentored participants through hands-on projects, focusing on building scalable and responsive **web applications**.
  - Fostered an interactive learning environment to enhance **participants' practical skills** and **problem-solving abilities**.
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### **Ambalay Maps – Remote**

**Frontend Engineer position** **January 2025 – Present**

Gained hands-on experience in full-stack development and geospatial technologies through impactful projects.

- **Designed and developed a user-friendly dashboard for map-based services**, integrating tools for route planning, geocoding, and real-time traffic updates.
  - **Built and enhanced production-ready APIs for geospatial data** using Node.js, Express.js, and Python, ensuring high performance and scalability.
  - **Created map rendering features** leveraging OpenMapTiles, MapLibre, and Valhalla for efficient visualization of geospatial data.
  - Managed PostgreSQL and MongoDB databases for map and user data storage, ensuring data accuracy and consistency.
  - Implemented localization features, including Amharic language support, and customized solutions for offline map access in regions with limited internet connectivity.
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### **Ministry of Industry – Ethiopia**

**Computer Engineer Intern** | **October 2024 – January 31**

- Acquired a **diverse skill set** through various professional experiences in the tech and manufacturing sectors.
  - Collaborated with a company specializing in **wired and wireless earphones**, gaining an **in-depth understanding** of their operational principles.
  - Currently developing a **website to facilitate the importation of products** from different countries, featuring tools for **managing HS codes** and **product specifications**.
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### **Prodigy InfoTech and Oasis Infobte – India**

**Frontend Developer** | **May 2024 – June 2024**

- **Assisted in building and maintaining web applications** using **JavaScript**.
- Worked on **front-end development tasks**, ensuring responsiveness and functionality.

## Skills

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- **Frontend Development:** Proficient in HTML, CSS, JavaScript (ES6+), React.js, React Native, Next.js, Angular; experienced with Tailwind CSS, Styled Components, Emotion.
- **State Management:** Skilled in Redux, Recoil, Zustand, React Context API.
- **Backend Development:** Experienced with Node.js, Express; proficient in MongoDB, MySQL, PostgreSQL.
- **Version Control & CI/CD:** Strong knowledge of Git, GitHub; familiar with GitHub Actions for CI/CD.
- **Testing:** Hands-on experience with Jest, Cypress, React Testing Library.
- **Build Tools & Security:** Experienced with Webpack, Vite, Babel; understanding of authentication mechanisms and security best practices in frontend development.

## PROJECTS

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### IoT-Based Smart Sewage Monitoring System

- Integrated **pH, gas, and ultrasonic sensors** to monitor sewer conditions, sending real-time alerts for overflows and gas concentrations.
- Designed a web-based admin dashboard and mobile app for data visualization, feedback, and worker assignments.
- Utilized **ESP8266** for wireless communication and **MongoDB** for cloud **storage**, enabling efficient monitoring and reporting.

### LMS - Learning Management System

[MERN Stack with Next.js 13 and TypeScript | Full-Stack Project](#)

- Built a **scalable industrial-level LMS platform** using **MongoDB, Express, React, Node.js, and TypeScript**.
- Implemented **user authentication and authorization** with **JWT-based session handling** and **email activation**.
- Developed advanced **course management features**, including **course creation, content access** (videos/quizzes), and **reviews**.
- Integrated **real-time notifications** using **Socket.io** and **Redis** for caching and performance optimization.
- Designed a modern **Admin Dashboard** for **managing users, courses, orders, and generating statistics**.
- Enabled **social login options** (Google/Facebook) and a secure **order tracking system**.
- Utilized **RTK Query** for data fetching, **Tailwind CSS** for responsive design, and **Node-cron** for scheduling tasks.
- Included **caching, performance enhancements**, and a **modular architecture** for scalability.

### MERN Stack Real-Estate Application

[React, Express.js | October 2024](#)

- Developed a **real estate platform** with **advanced authentication** using **JWT, bcrypt.js, and Google Login**.
- Integrated **Firebase** for image uploads and implemented **Redux Toolkit** for efficient state management.
- Designed a **fully responsive interface** using **Tailwind CSS**, featuring **advanced search** and **optimized routing**.

### MERN Blog Application

[React, Express.js | September 2024](#)

- Built a **blogging platform** with **secure user authentication** via **JWT** and **bcrypt.js**.
- Included an **admin dashboard** for managing posts and interactions, backed by **MongoDB**.
- Created a **responsive design** using **Tailwind CSS**, supporting **post creation, commenting, and seamless navigation**.

## INTERESTS

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Football Aficionado

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Typing games

Deep Learning