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# MUHAMMAD HASSAN

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## SUMMARY

- **Fullstack Expertise:** 9+ years of experience developing scalable web applications using **Angular**, **React.js**, **Nodejs**, **Nestjs**, **Spring Boot**, **TypeScript** and **Java** specializing in dynamic, data-driven web applications and backend services.
- **Backend Proficiency:** Extensive expertise in **Spring Boot**, **Nodejs**, **Nestjs** for building **RESTful** and **GraphQL APIs**, implementing **microservices architecture**, working with **ORM tools** (Hibernate, JPA, TypeORM, Prisma), and managing databases including **PostgreSQL**, **MySQL**, **MongoDB**, and **Redis**.
- **Frontend Mastery:** Advanced skills in **Angular** (NgRx, RxJS) and **React.js** (Redux, Hooks) for developing **single-page applications (SPA)** with **SCSS**, **Tailwind CSS**, and **Material UI**, ensuring modular and reusable components.
- **Cloud & DevOps:** Proficient in **AWS** (EC2, Lambda, S3, RDS), **Azure**, and **Google Cloud**, with hands-on experience using **Docker**, **Kubernetes**, **Terraform**, and **CI/CD pipelines** (Jenkins, GitHub Actions, GitLab CI/CD) for automated builds and deployments.
- **Modern Architectures:** Expertise in designing applications using **Microservices**, **Serverless**, **Monolithic**, and **Clean Architecture** patterns, implementing **SOLID principles**, **CQRS**, and **Hexagonal Architecture** for maintainable and scalable systems.
- **Security & Performance:** Strong focus on **secure coding practices** with **JWT**, **OAuth2**, **OpenID Connect**, **RBAC**, and implementing performance optimization techniques like **caching strategies**, **rate-limiting**, and **load balancing**.
- **Testing & Quality Assurance:** Hands-on experience with **Jest**, **Jasmine**, **Mocha**, **Chai**, **Cypress**, and **Test-Driven Development (TDD)** methodologies to ensure **high-quality code** with thorough **unit**, **integration**, and **end-to-end** testing.
- **Collaboration & Agile:** Proven leadership in mentoring development teams, driving **Agile** and **Scrum** practices, using tools like **JIRA** and **Trello**, and maintaining code quality through **Git** version control best practices.
- **Key Achievements:** Successfully led the migration of monolithic apps to **serverless architecture**, reducing operational costs by **30%**, and developed a **real-time messaging platform** using **WebSockets**, improving system responsiveness and user engagement.
- **Soft Skills:** Excellent **problem-solving**, **critical thinking**, and **collaboration** skills with a focus on **continuous learning** and staying current with modern technologies and industry trends.

## EXPERIENCE

### Elm Company, Saudi Arabia –

#### *Full-Stack Engineer*

Sept 2023 – Current

- **Leadership & Team Management:** Leading both **frontend (Angular)** and **backend (Spring, Spring Boot)** teams by assigning tasks, tracking issues, and ensuring code quality through testing and code reviews.
- **Frontend Modernization:** Successfully upgraded the application from **Angular 12** to **Angular 17**, implementing **Angular Material** and the new **Control Flow** features for improved performance and maintainability.
- **Backend Expertise:** Managing and optimizing **Sprint Boot** services by developing reusable, efficient, and testable code for **high-performance** backend services with real-time data handling using **WebSockets**.
- **AI Integration:** Designed and developed a complete pipeline for **training and consuming AI models**, integrating API-based predictions and visualizing results on the frontend for enhanced user insights.
- **UI/UX Development:** Translated **Figma** designs into **responsive** and **reusable web components**, ensuring pixel-perfect implementation using **Angular Material** and **Tailwind CSS**.

### Exceed IT Services, Egypt – *Full-Stack Engineer*

Apr 2022 – Sept 2023

- **Full-Stack Development:** Developed a **CMS**, **Admin Panel**, and **Public Sites** for the **SDAA Government Project** using **Angular**, **Nestjs**, **Nodejs**, **Spring Boot**, **Java** and **TypeScript**, ensuring modular and maintainable codebases.
- **Feature Implementation:** Implemented **request management**, **UAE Pass authentication**, and **dynamic content management** with **dual-language support** using **Angular Material** and **Tailwind CSS** for enhanced user experience.
- **Containerization & DevOps:** Containerized both **frontend** and **backend** applications using **Docker** and automated multi-service management with **Docker Compose**, ensuring a consistent development and production environment.
- **Monorepo Architecture:** Implemented **NX Monorepo** architecture for **code sharing** and **dependency management** across multiple projects, reducing build times and promoting code reuse.

### META SMART FACTORY, SLOVENIA – *Sr, Angular Developer*

NOV 2019 – March 2022

- **Angular Development Expertise:** Led the development of a **real-time factory monitoring application** using **Angular** with a focus on **component-based architecture**, **modular design**, **JAVA**, and **TypeScript** best practices.
- **State Management & Performance:** Implemented **NGXS** and **RxJS** for efficient **state management**, and used **lazy loading** for optimized module handling, improving app performance and scalability.

- **UI/UX Design Collaboration:** Designed and developed **responsive user interfaces** by collaborating with the design team and implementing **Angular Material** and **SCSS**, ensuring cross-device compatibility and modern UI standards.
- **Data Visualization & Analytics:** Developed complex data visualization features, enabling **real-time reporting** and analysis of metrics like **OEE**, **production orders**, **workstations**, **employees**, and cost breakdowns on a **plant-by-plant** and **shift-by-shift** basis.
- **Backend & Integration:** Collaborated with the **Spring Boot** backend team for **bug fixes**, **entity class changes**, and effective **RESTful API** integrations to ensure seamless data flow between frontend and backend systems.

### **PREMIER SOLUTIONS, LAHORE – Full-Stack Developer**

SEP 2017 – SEP 2019

- **Full-Stack Development:** Developed **single-page applications (SPA)** using **Angular 5**, **CSHTML**, **Bootstrap** for the frontend and **Spring Boot Framework** **Nodejs**, **Expressjs** for the backend, ensuring a clean and modular architecture.
- **Real-Time Communication Features:** Built real-time communication tools for **CCM Healthcare** and **Tutoring App**, including **chat rooms**, **video conferencing**, and **one-to-many video streaming** using **WebRTC** and **WebSockets**.
- **State Management & Performance:** Implemented **NGRX** and **RxJS** for state management and **real-time data processing**, ensuring smooth, dynamic interactions and minimal performance bottlenecks.
- **Collaboration Tools:** Developed a **Whiteboard feature** for real-time collaboration between students and tutors, enhancing the e-learning experience with live annotations and data synchronization.
- **Cloud & Security:** Ensured **application performance**, **security**, and **reliability** by deploying **Spring boot** services in a **cloud environment (AWS)**, implementing secure **API endpoints** and **JWT authentication**.
- **Project Management & Delivery:** Successfully delivered **three full-stack projects (CCM Healthcare, Locummed, Tutoring App)** with **Angular** for the frontend and a **hybrid backend**.
- **Optimization & Code Quality:** Focused on writing **testable**, **reusable**, and **efficient** code with **unit tests**, while ensuring optimal **data quality**, **flexibility**, and **operability** for large-scale applications.
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### **MAXPRO, LAHORE – WEB DEVELOPER**

JULY 2016 – SEP 2017

- **Web API Development:** Developed a **Web API** for an **Electronics Company** using **ASP.NET**, focusing on **modular architecture**, **data security**, and **scalability**.

- **Real-Time Communication:** Implemented **SignalR** for **real-time data communication**, enabling instant updates across web interfaces for live data monitoring.
- **Authentication & Security:** Designed and implemented **secure authentication** and **authorization** mechanisms, including **JWT-based access control**, **email confirmation**, and **password reset** features.
- **IoT Integration:** Built **Socket Connections** for **IoT devices** to capture real-time device data, store it in a database, and visually represent the data using **charts** on a web dashboard.
- **Frontend Development:** Utilized **Bootstrap** and **CSS** for creating **responsive web layouts** and **Knockout.js** for dynamic, **data-driven UI components**, improving development speed and user experience.
- **Agile Development:** Followed **Agile Scrum** methodology by breaking the project into **sprints**, ensuring iterative delivery, progress tracking, and regular feedback integration.
- **Code Quality & Optimization:** Delivered **clean, testable, and maintainable code** while optimizing the web application's **performance** and **data handling** for large datasets.
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## Github & LinkedIn Profile

Github Profile: <https://github.com/MrHassanKhan>

LinkedIn Profile: <https://www.linkedin.com/in/muhammadhassandev/>

## SKILLS

<ul style="list-style-type: none"> <li>• Programming Languages: <ul style="list-style-type: none"> <li>• TypeScript</li> <li>• JavaScript</li> <li>• Java</li> <li>• Python</li> </ul> </li> <li>• Frameworks: <ul style="list-style-type: none"> <li>• Angular</li> <li>• React</li> <li>• Ionic</li> <li>• Nestjs(Nodejs)</li> <li>• Spring Boot</li> <li>• Pytorch</li> <li>• Tensorflow</li> <li>• Scikit learn</li> <li>• Transformer</li> </ul> </li> <li>• UI Libraries: <ul style="list-style-type: none"> <li>◦ Angular Material</li> <li>◦ Tailwind CSS</li> <li>◦ Bootstrap</li> <li>◦ Mdbootstrap</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Source Code Management: <ul style="list-style-type: none"> <li>• Git</li> <li>• Github</li> <li>• GitLab</li> <li>• BitBucket</li> </ul> </li> <li>• Methodologies: <ul style="list-style-type: none"> <li>• Agile</li> <li>• SCRUM</li> <li>• JIRA</li> </ul> </li> <li>• DataBases: <ul style="list-style-type: none"> <li>• Postgres</li> <li>• MySql</li> <li>• MongoDB</li> <li>• VectorDB</li> </ul> </li> <li>• Development Tools: <ul style="list-style-type: none"> <li>• VSCode</li> <li>• MySQL Workbench</li> <li>• pgAdmin</li> <li>• IntelliJ</li> </ul> </li> <li>• Others <ul style="list-style-type: none"> <li>• NX</li> <li>• NGRX/NGXS</li> <li>• Docker</li> </ul> </li> </ul>
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<ul style="list-style-type: none"> <li>○ Primeng</li> <li>○ Material UI</li> </ul>	<ul style="list-style-type: none"> <li>● Elastic Search</li> <li>● S3</li> <li>● AWS</li> </ul>
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## EDUCATION

### **AUP, PESHAWAR – BSSE**

JAN 2011 – JUL 2016, PESHAWAR

Bachelor in Software Engineering, Pakistan – 2016.

## TRAININGS & CERTIFICATIONS

- Getting Started With SPA Applications
- All Angular Courses (Deborah Kurata)
- Spring Boot Rest API, JPA, Lombok, Security, MVC & Microservices + SQL + JDBC + Core Java
- Introduction to Data Science in Python
- Introduction to Machine Learning in Python
- KPIT Board Certifications in Machine learning Course
- London IT Training – Machine Learning and Deep Learning Certification