

MOHAMAD SABHA

Data Scientist | Machine Learning Engineer | IEEE Award-Winning Researcher | Full-Stack Developer

🌐 Personal website | 🌐 LinkedIn | 🌐 GitHub | ✉ Mhd.sabha@hotmail.com | ☎ +48 575 061 725 | 📍 Kraków-Poland

IEEE award-winning Software Engineer and Full-Stack Developer with an M.Sc. with expertise in Implementing machine learning solutions and building scalable data pipelines using Apache Kafka and Spark Structured Streaming for real-time analytics. Skilled in developing modern web applications with ASP.NET, React, Node.js, and MongoDB. Experienced in delivering robust, user-friendly, and secure solutions, and integrating AI-powered features from advanced machine learning models to enhance application intelligence. Eager to contribute to end-to-end projects and grow as part of a collaborative development team.

PROJECTS

- ❖ **Breast Cancer Prediction with Feature Selection (IEEE Best Paper Award):** Evaluated multiple ML classifiers and feature selection strategies, evaluating their impact on performance metrics to demonstrate that precise feature selection can be as critical as algorithm choice in achieving optimal model performance.
- ❖ **MERN Blog Platform (Full-Stack):** Built and deployed a platform to serve as a modern content hub. Secures data with JWT auth, empowers admins with a moderation dashboard, and delivers a responsive UX. Integrated rich text editing, media uploads, and dynamic categorization.
- ❖ **Real-Time Outlier Detection Pipeline:** Designed and implemented a scalable real-time data processing pipeline for unsupervised outlier detection on human activity streams using Apache Kafka and Spark Structured Streaming.
- ❖ **AI-Powered Semantic Search Engine (Full-Stack + AI):** Developed and deployed a semantic search engine. Used a local Hugging Face model for MongoDB vector embeddings and integrated OpenAI's API for an intelligent Q&A chatbot.
- ❖ **SpaceX Falcon 9 Landing Prediction (Capstone):** Executed full data pipeline from API collection to interactive visualizations, and built a predictive ML model by evaluating and tuning multiple algorithms for rocket landing success.

PROFESSIONAL EXPERIENCE

ASP.NET FULL-STACK WEB DEVELOPER.

IT Department - University of Tabuk - SEP 2017-Oct 2019

- ❖ Led the design and implementation of a Single Sign-On (SSO) integration between the University of Tabuk and the Saudi National Information Center, enabling secure access to systems with government credentials and streamlining authentication.
- ❖ Developed and maintained full-stack ASP.NET applications, improving departmental workflows and enabling efficient data management.
- ❖ Designed and implemented responsive, user-friendly interfaces that improved cross-device compatibility and engagement.
- ❖ Integrated and processed data from internal systems and external APIs/web services.

MICROSOFT STUDENT PARTNER (MSP).

Riyadh, Saudi Arabia - Aug 2015- Aug 2017

- ❖ Developed expertise in Microsoft technologies and built demo applications to showcase practical use cases.
- ❖ Organized and delivered technical workshops, training sessions, to engage students and apply coding skills in real projects.
- ❖ Collaborated with student developer teams in Northern and Western regions on technical tasks and projects.
- ❖ Created tutorials, guides, and presentations to document and share technical knowledge with peers.

EDUCATION

- ❖ **M.Sc. Degree** – Master of Computer Engineering | Ankara University *Turkey 2021 - 2023 GPA 3.69/4 | Scholarship Student*
- ❖ **B.Sc. Degree** - Bachelor of Computer Science | Tabuk University *Saudi Arabia 2014 - 2017 GPA 4.94/5 | Scholarship Student*
- ❖ **Certifications:** IBM Data Science Professional Certificate (12-course series with capstone project)

SKILLS

Machine Learning & Data Science: Python, Scikit-Learn, Pandas, NumPy, Feature Engineering, Anomaly Detection, Supervised & Unsupervised Learning, Data Visualization, EDA, OpenCV.

Data Engineering & Big Data: Apache Spark, Apache Kafka, SQL, NoSQL (MongoDB, Firebase).

Web & Full-Stack Development: React, Node.js, .NET, Redux, REST APIs, Docker, Git, TFS, Tailwind, Bootstrap, Material UI.

PUBLICATIONS

- ❖ Stream Data Analysis and Processing Frameworks for Detecting Outliers in Human Activities: A Review.
WSEAS Transactions on Information Science and Applications V 22. JAN 2025
- ❖ Outlier Detection Over Streaming Data of Human Activities.
ProQuest Dissertations & Theses .31159568. MAR 2023
- ❖ Breast Cancer Prediction Using Different Classification Algorithms with Various Feature Selection Strategies.
IEEE, 29. DEC 2021
- ❖ The Design and Development of a Smart Fire-Fighter Robotic System.
Int Rob Auto J 3.6. DEC 2017

LANGUAGES

- ❖ English: TOEFL iBT Score – 86.
- ❖ Turkish: Certified (C1 Level).
- ❖ Polish (A1/A2 - Basic Communication).
- ❖ Arabic: Native language.

Legally authorized to work in Poland with full access to the labor market; available to join without administrative delays.

References available upon request.