

Mohamad Adel Kabbani

Telecommunications Engineer | MSc Data Analytics | IoT Security & Infrastructure Modeling Enthusiast

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Professional Summary

Multidisciplinary engineer and MSc Data Analytics candidate with 6+ years of experience in network infrastructure, cybersecurity, and data-driven decision-making. Specialized in **IoT anomaly detection, system simulations, and resilient network design** through **machine learning and edge/cloud integrations**.

Adept at translating technical insights into practical, scalable solutions—especially within **resource-constrained and real-time environments**.

Currently seeking to contribute to the **Resilient Infrastructure Technology Suite (RITS)** project by applying a unique blend of **network engineering, AI, and cross-domain research acumen**.

Core Competencies

- **System Modeling & Infrastructure:** Network simulation (GNS3), VLAN design, OSPF routing, WAN/LAN architecture
 - **Cyber-Physical Systems:** IoT security, anomaly detection, federated learning, edge computing
 - **Machine Learning & Data Analytics:** Python (Pandas, Scikit-learn), CNN, One-Class SVM, PCA, model evaluation
 - **Data Visualization & Tools:** Tableau, Power BI, Git, Jupyter Notebook
 - **Certifications:** Cisco CCNA | Project Management Bootcamp (Excelr)
 - **Languages:** English (C1), Arabic (Native), Turkish (B2), German (A1 – beginner)
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Education

MSc Data Analytics (Expected Apr 2025)

Berlin School of Business & Innovation – Berlin, Germany

BSc Informatics Engineering

Ittihad Private University – Aleppo, Syria

Thesis (In Progress)

Anomaly Detection for IoT Networks Using Machine Learning

- Designed a **simulated hospital IoT network** for security modeling using GNS3
- Compared performance of models like **One-Class SVM vs. Isolation Forest**
- Integrated **edge/cloud computing, dimensionality reduction, and federated learning**
- Developed the **CNNwGFC model** achieving **95%+ accuracy** in anomaly detection
- Addressed real-world challenges: **energy efficiency, multi-class classification, and model scalability**

 Demonstrated ability to model **resilient infrastructures** and derive **actionable insights** from complex, real-time systems.

Selected Projects

Smart Anomaly Detection for Resilient IoT Infrastructure

- Simulated a secure hospital infrastructure mimicking EWF interdependencies
- Implemented **feature selection and SHAP analysis** to identify mission-critical vulnerabilities
- Proposed scalable ML-based detection strategies for decentralized networks

Predictive Analytics for Coffee Trade (Tableau + Python)

- Built regression models to forecast global coffee exports
 - Interpreted trends with Tableau dashboards for policy impact simulation
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Professional Experience

Assistant Manager – TakeTaxi UG, Berlin

Oct 2021 – Present

- Analyzed real-time fleet movement and customer behavior to optimize routing efficiency
- Applied **data-driven models** to enhance logistics resilience during system outages

IT Administrator – Epigra, Istanbul

Jan 2016 – Apr 2018

- Maintained **enterprise network infrastructure** with 99.9% uptime
- Configured **firewalls, routers, and NAT policies** for secure communication

Sales Support Assistant – Yetkin Bayer, Istanbul

May 2018 – Jul 2019

- Streamlined CRM workflows and implemented structured lead tracking
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Certifications

- **Cisco Certified Network Associate (CCNA)**
 - **Interconnecting Cisco Networking Devices (Part 1 & 2)**
 - **Project Management Bootcamp** – Excelr (Agile, Risk, Estimation, Critical Path)
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Research & Technical Tools

- **Simulation & Modeling:** GNS3, VLAN, OSPF, BGP, DoS/Access Attack Simulation
 - **AI & ML:** One-Class SVM, CNN, Isolation Forest, Feature Engineering
 - **Cloud & Dev Tools:** AWS (Basics), Git, Jupyter, Excel, SQL
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Soft Skills & Research Strengths

- Strong analytical mindset with research exposure in **academic and applied AI settings**
 - Quick learner who adapts to evolving tech stacks and interdisciplinary collaborations
 - Proven resilience working in **resource-constrained, real-world environments**
 - Curious, puzzle-solving attitude toward emerging infrastructure and network systems
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