

## DR. AHMAD KHOKHAR

Al & Robotics Architect / Specialist



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## **ABOUT:**

Proud Bruin (20+ years of IT experience under the belt as well as managing large teams), who is a self-directed/driven AI & Robotics architect/specialist with comprehensive accomplishments, applying bleeding-edge technologies, computer vision, machine learning and data visualizations to ensure successful delivery of projects that go above and beyond the client's expectations.

Known as an innovative thinker and one of the leaders in the field of Artificial Intelligence, having successfully undertaken projects ranging from custom sensor development and integrations (IoT) to creating sophisticated algorithms and applications for Safe Cities and Smart Cities covering areas such as/but not limited to (Advanced Video Analytics, Voice and Data comm, Smart Power & Metering, Advanced Intelligent Traffic Systems along with their respective offshoots, Hybrid Connectivity & IoT Integrations, Cyber Security, Data Warehousing & Virtualizations).

Successfully completed numerous High-Security projects involving automated drones/UAV intervention and allocation, unmanned/autonomous systems and vehicles, LiDars/Radars/Thermal sensors with customized models for identification/classification of concealed weapons.

Demonstrated success developing and seamlessly executing plans across complex data sets. Recognized for maximizing performance by implementing appropriate data mining strategies through analysis of details to gain an understanding of the data structures, databases, relationships, and business needs.

Highly organized, creative problem-solver who excels at producing business value by applying data analytics best practices and bespoke integrated solutions to challenging problems while minimizing time and maximizing the ROI.

Have had the privilege of providing solutions/services to major LEA's.

In pursuit of creating artificial intelligence premised around evolutionary objectives.

### **ACADEMICS:**

- PHD | COMPUTER SCIENCE (SOFTWARE SYSTEMS & NETWORK SYSTEMS)
- ♦ UNIVERSITY OF CALIFORNIA, LOS ANGELES
- MASTERS | COMPUTER INFORMATION SYSTEMS AND SUPPORT SERVICES
- UNIVERSITY OF CALIFORNIA, BERKELEY

#### Research Areas

Adversarial Machine Learning
Federated Learning
Orchestration Platforms
Multi-modal inference
Safe City Segmentation / Analytics
Unified Smart City Frameworks
Domain Adaptive Retrieval (NLP)
Anti-Spoofing (Biometrics)
Traffic Systems w/advanced analytics
Intelligent Transport Systems

# Memberships & Certifications

Forbes Technology Council World Economic Forum Defence IO

IEEE Computational Intelligence Society

IEEE Computer Society

IEEE Consumer Technology Society

**IEEE Intelligent Transportation Systems** 

IEEE Robotics and Automation Society

IEEE Systems, Man, and Cybernetics

IEEE Vehicular Technology Society IEEE Biometrics Council

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IEEE Council on RFID

IEEE Sensors Council

**IEEE Smart Cities** 

### **Tech Stacks**

Apache Kafka, Apache Storm, Apache Spark, Apache Hadoop, OpenStack, OpenAI, AWS, MS Stack, PHP Stacks, Python, Tensorflow, PyTorch, Citrix and forked Orchestration, Docker, Elixir, Phoenix Framework, IBM Watson, Azure AI, MS Cognitive TK, Custom ROS

## • RECENT PROJECTS:

- Excise and Narcotics Dept. (Mobile ANPR)
- Excise and Narcotics Dept. (Track and Trace for Distilleries and Breweries)
- Facial Recognition System at Major Airports in Pakistan
- Garrison Biometric Integration and Visitor / Personnel Management System
- Gwadar Safe City (Consultancy)
- Karachi Metrobus (Green Line / Orange Line)
- Karachi Security & Surveillance Project
- Lahore Metrobus System
- Lahore Safe City Expansion and Integration (Exit/Entry)
- Ministry of Defense Production R&D
- National Highways and Motorways Police 130 Emergency Response System
- Pakistan Railways Facial Recognition System
- Pakistan Railways RFID Asset Tracking and Management System
- Police Command & Control Center (Karachi)
- Weapon Detection System
- Anomaly Detection and Individual Identification (Multi-Pipeline)
- Rescue 1299 Call Center
- Quetta Smart City (Consultancy)
- Quetta Safe City
- Punjab Prisons: Unified Trouble Ticket Management System

## FUNCTIONAL AREAS:

- Enterprise Applications
- Development Systems Analysis
- Business Analysis
- ♦ AL/ML
- Robotics

