Muhammad Ghufran Akbar

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Post graduate with a sound knowledge of **Computer Science & Engineering**. Prior experience in the **IT Division of Banking, Sports and Lifestyle, Telecom and E-Commerce** Sector. Leveraging my skills in **financial modelling, operations optimization, computer simulations, business analytics & intelligence, and artificial intelligence**. Looking for opportunities that resonate well with my background.

EDUCATION

Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) — Nuremberg, DE
M.Sc in International Information Systems — Oct 2024 - Sept 2026

Ghulam Ishaq Khan Institute of Science & Technology (GIKI) — Topi, PK
B.Sc in Engineering Sciences — Aug 2018 - July 2022
Cumulative GPA: 3.40/4.0; German Equivalent: 1.60; **Gold Medallist**

WORK EXPERIENCE

PUMA GROUP — Herzogenaurach, BY, DE
Global Ecommerce Engineering Intern — Apr 2024 – Mar 2025
- **Led** the global unification of the Order Management System (OMS) across 4 regions by gathering requirements, consulting regional teams, and integrating with **ERP, Salesforce Commerce Cloud (SFCC), Payment Gateways, Carriers,** and Warehouses via robust **API** and **GQL**-based interfaces.
- **Migrated** systems to **Google Cloud Platform** (GCP), optimized vendor costs, and implemented a **GenAI-powered chatbot** within OMS, reducing support tickets by **40%** and improving operational efficiency.
- Built real-time **dashboards** to monitor order flow and performance across markets, and enabled **data-driven decisions** that boosted order processing speed by **25%** and improved visibility across regions.
- Delivered key **omnichannel features** like Click & Collect and Endless Aisle, managed Agile ceremonies using **Atlassian tools (Jira, Confluence)**, ensured **98% UAT** success, and provided post-go-live hypercare and L2 support coordination across global rollouts.

BANK AL HABIB LIMITED — Karachi, PK
Software Architect & Developer — Aug 2022 – Sep 2023
- Modernized the legacy banking system by designing a new **microservices-based architecture** using **Java Quarkus**, leading to a **30%** reduction in deployment time and improved system scalability; actively contributed to service orchestration and performance optimization.
- Built and maintained full-stack applications using **ASP.NET Core**, **Vue.js with TypeScript**, and **Next.js**, while developing RESTful APIs for internal and external services to ensure secure, efficient system communication across the consumer banking ecosystem.
- Delivered analytical reports and dashboards using **IBM Cognos** and **Power BI**, streamlining non-financial transaction analysis and improving reporting efficiency by **40%**, supporting strategic decisions with data-driven insights.

THRIFLE TECHNOLOGIES (start up led by 3 people based in USA) — Remote
Business Development Specialist — Aug 2021 – July 2022
- Defined KPIs and performed user behavior analysis using **Google Analytics** to support data-informed product decisions.
- Created **wireframes** for platform development and wrote product descriptions to support UI/UX design and go-to-market readiness.

PROJECTS

SUPER RESOLUTION USING HYPERSPECTRAL IMAGING AND ATTENTION BASED CNN
- Developed a deep learning-based framework to enhance the **spatial resolution of hyperspectral images (HSI) by 2×**, while maintaining over **90% spectral similarity**, aiding more accurate ore classification.
- Built an attention-based CNN model to fuse **low-res HSI (100×100×240)** with **high-res MSI (400×400×3)**, achieving a **PSNR improvement of ~4 dB** over baseline bicubic interpolation.
- Preprocessed and analyzed **250+ hyperspectral image cubes** using Python and MATLAB, extracting key spectral features and optimizing input pipelines for better model generalization.
- Achieved **2nd place** among **20+ final-year projects**, delivering a low-cost, ML-driven super-resolution prototype to support TerraCore's imaging operations in mining exploration.

FINANCIAL ANALYSIS FOR NEW MANUFACTURING UNIT
- Simulated **1,000+ Monte Carlo scenarios** using **NPV, perpetuity, and pricing contract models** to evaluate 10-year financial viability for setting up a new manufacturing unit.
- Identified a **75% likelihood of positive NPV**, highlighting profitability under varying cost and revenue assumptions to guide investment decisions.
- Designed an interactive **Power BI dashboard** with pivot tables to visualize simulation results, breakeven timelines, and risk sensitivity for executive stakeholders.

ACHIEVEMENTS & SKILLS

Technical Skills: C++, C#, Vue.js, Python, BigQuery, Database & SQL, Java Quarkus, React, Express JS, Node JS, TensorFlow, GQL, Arduino
Software: MATLAB, Simulink, PowerBI, Tableau, GCP, Jira, Confluence, Adobe Photoshop & Illustrator, Proteus, Solid Works, Neo4J
Certifications & Training: Data Science Professional Certificate (IBM), Data into Information using PowerBI (SCT)
Awards: Gold Medallist; **1st** in BAHL IT Trainee Program; **Dean's Honor Roll** in 5 semesters; **Head of Data Analytics and Technical Report, Team Invictus** – Secured 2nd position in Phase 1 of **AIAA DBF 2021** out of 115 global teams, with an overall ranking of 18th and a report score of 82.