

Abd Alrhman Abu Sbeit

Forward Deployed Engineer | Software & Data Engineer

317-478-6761 | abdalrhman_a98@live.com | linkedin.com/in/abdalrhman-abu-sbeit | github.com/abu-sbeit
portfolio-abusbeit.vercel.app | Indianapolis, IN

US work authorized, no sponsorship required | Open to relocation across the US

Summary

Software engineer with 5+ years of experience turning customer problems into production software in banking and industrial manufacturing. For GR3N, a PET chemical-recycling company, built a pipeline that turns 3M+ raw plant sensor readings into a process model of its operations, revealing bottlenecks and material sent back upstream for reprocessing (first-author paper, ICPM 2025). Delivered banking systems end to end for banks in Oman and Qatar, owning security and cutting transaction time by about 30%. US permanent resident; builds AI-assisted software with Claude Code.

Experience

ICT Developer – Customer-Facing Data Engineer, EU AutoTwin Project

Nov. 2024 – Nov. 2025

Eindhoven University of Technology (industry client: GR3N, PET chemical recycling)

Eindhoven, Netherlands

- Acted as the technical lead for GR3N, working directly with its owners to turn plant sensor data and process questions into requirements, data models, and working software.
- Built a production Python pipeline that turns 3M+ readings from 218 plant sensors into event logs and a Neo4j knowledge graph of 1,566 material batches, with noise filtering and validation, in about 11 minutes end to end.
- Built a process model of the plant from this data that revealed bottlenecks and material being sent back upstream for reprocessing, giving GR3N concrete points to optimize.
- GR3N's process owner confirmed the inferred material flows matched real plant operations; the pipeline was credited as key to the positive EU evaluation and published as a first-author paper at ICPM 2025.

Software Developer (Remote)

Aug. 2022 – Jul. 2023

ProgressSoft Corporation

Amman, Jordan

- Delivered production banking systems end to end for international banks in Oman and Qatar, from requirements through design, testing, and release, and extended a third system with new features.
- Owned security on those systems: JWT authentication, data encryption, and access control built to financial compliance requirements, with Liquibase migrations run against databases that stayed live.
- Profiled latency with JProfiler and Grafana k6, then cut transaction time by about 30% with caching and indexes.

Associate Java Developer

Jun. 2020 – Aug. 2022

ProgressSoft Corporation

Amman, Jordan

- Built backend features and REST APIs in Java, Spring Boot, and Hibernate/JPA for a major bank in Qatar.
- Cut latency by refactoring legacy modules and SQL queries; covered transaction workflows with JUnit and Mockito tests.

Education

Ph.D. Candidate, Process Mining and Simulation, TU Eindhoven, Netherlands

Nov. 2025 – Oct. 2026

M.Sc. Data Science and AI (Process Mining), Erasmus Mundus BDMA: TU Eindhoven, UPC, ULB

Sep. 2022 – Sep. 2024

B.Sc. Business Information Technology, GPA 3.68/4.0, The University of Jordan, Amman

Sep. 2016 – Jun. 2020

Projects

Digital Twin for Business Processes – Personal project built with Claude Code; Python, SimPy, PM4Py, pandas

2026

- Turns event logs into a live, predictive digital twin for what-if analysis; validated on BPI Challenge 2017 (1.2M events).
- Combines object-centric process mining, concept-drift detection, ML cycle-time prediction (7.13-day MAE), and simulation within 7% of real cycle time to recommend operational changes from live state.

Technical Skills

Languages & Backend: Python, Java, SQL, Cypher, Spring Boot, FastAPI, Hibernate/JPA, REST APIs, Microservices

Data & Process Mining: ETL Pipelines, Data Modeling, Kafka, Airflow, Databricks, pandas, NumPy, PM4Py, Celonis, SimPy

Databases & Cloud: PostgreSQL, MySQL, Neo4j, MongoDB, Knowledge Graphs, Docker, AWS (S3), GitHub Actions, CI/CD

Testing & AI Tooling: JUnit, Mockito, TDD, Grafana k6, JProfiler, Liquibase, Git, Claude Code, Claude Agent SDK

Publications

Abu Sbeit, A. A., Cavadini, F., & Fahland, D. (2025). *Enabling Object-Centric Process Mining from Time-Series*. 7th International Conference on Process Mining (ICPM 2025), Montevideo, Uruguay. doi.org/10.5281/zenodo.17412425

Certifications and Languages

Certifications: Databricks Fundamentals (2026); Claude 101, Anthropic (2026); AI Fluency, Anthropic (2026)

Languages: Arabic (Native), English (Professional, IELTS 7.0), Spanish (B1)