Mustafa Alsaegh

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Skills

Programming Languages: Python, R, Java, Scala, C, C++, JavaScript, HTML, CSS, Lua

Big Data & Machine Learning: Spark, Hadoop, MongoDB, Python (eg. scikit-learn, numpy, pandas, matplotlib) , Tableau & PowerBi, Mattersight

Data Science & Miscellaneous Technologies: A/B testing, ETL, Data science pipeline (cleansing, wrangling, visualization, modeling, interpretation), Statistics, Time series, Experimental design, Hypothesis testing, OOP, OOD, APIs, Advance Excel, Git

Education

Indiana University – Bloomington, IN

Masters of Science in Data Science – January 2020 – April 2024

- ***Current GPA in Major***: 3.93
- ***Degree program highlights***: Machine Learning, Data Science Statistics, Big Data Analytics, Probability & Discrete Mathematics

Indiana University – Bloomington, IN

Bachelor of Science in Business Administration – January 2018 – May 2020

- ***Current GPA in Major***: 3.65
- ***Honors***: Member of the National Honor society as well as the IU Honor Program and Dean's list, 2018 to present.
- ***Degree program highlights***: Accounting, Finance, Information System, Financial Management, Digital Marketing Management & Int. Business

IvyTech Community College – Bloomington, IN

Associate of Science in Business Administration – January 2013

- ***Current GPA in Major***: 3.70

Experience

Ellucian(WCC)- Ann Arbor, MI April 2024 – **Present**

Database Specialist

- Audited and validated institutional records using SQL queries and Power BI data models, improving data accuracy by 28%.
- Designed automated Power BI dashboards integrating survey, student, and enrollment data using DAX and Power Query, reducing manual reporting time by 40%.
- Implemented Python-based data validation scripts to detect duplicate and missing records, increasing quality assurance efficiency by 35%.
- Developed Excel audit templates with dynamic formulas (INDEX-MATCH, IFERROR, conditional formatting) for department-wide data integrity checks.

Indiana University Health- Bloomington, IN May 2021 - April 2024

Machine Learning Researcher

- Managed large-scale health and biological datasets, supporting projects related to chronic conditions and diagnostics.
- Generated insights from existing data using Python [Plotly, Seaborn, Matplotlib], R Shiny, and Power BI.
- Maximized quantitative reporting with batch processing pipelines, cutting data processing time by 40%, and enabling faster data transformations, visualizations, and statistical analysis for improved decision-making.
- Enhanced performance in data wrangling by 35% using fast and memory efficient libraries such as data.table in R.
- Optimized, automated efficient ETL processes by data warehousing, 20+ SSIS packages & stored procedures, reducing production time from 2 hours to 15 minutes

Bloom Insurance- Bloomington, IN January 2018 – December 2019

BI Developer

- Conducted routine and ad-hoc quality audits of healthcare data to ensure compliance with regulatory standards.
- Developed Excel-based dashboards using pivot tables and VLOOKUP to track performance metrics and identify discrepancies.
- Collaborated with senior management to recommend process improvements that improved compliance accuracy by 80%.

- Reviewed diagnosis codes and medical documentation to support accurate claims processing and adherence to guidelines.

Cook Medicale- Bloomington, IN

Assembly February 2012 – July 2014

- Assembled and tested sterile medical devices in a cleanroom environment, following FDA and ISO 13485 standards for quality and safety.
- Conducted visual inspections and data entry for production tracking using SAP-based systems.
- Supported process improvement initiatives that reduced defect rates by 15% through better documentation and batch record accuracy.
- Collaborated with engineering and QA teams to ensure compliance with manufacturing protocols.

Sales Associate July 2014 – March 2017

- Transitioned from assembly to customer-facing role, managing product inquiries and order fulfillment for medical device clients across the Midwest region.
- Maintained product documentation, order accuracy, and reporting through CRM and Excel-based tracking tools.
- Collaborated with internal logistics and customer service teams to achieve 98% on-time delivery for key accounts.
- Provided feedback to product and operations teams based on recurring client trends, improving order accuracy and satisfaction scores.

Projects

Duke Energy- Grid Reliability & Demand Forecasting - Bloomington, IN

Tali (*Indiana University -SPEA school Hatchery Startup Accelerator)* April 2018 - September 2018

- Pitched to a private therapy provider to raise 5K for creation of subscription based web application that helps university students with autism and/or ADHD achieve academic goals.
- Surveyed 20+ students and consulted with board certified therapists to create alpha prototype.
- Pitched weekly throughout the accelerator program and ultimately chosen as top 10 of 50 teams.

Cofounder & Business Lead Bloomington, IN

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President Richmond, Indiana

TechXplore (Indiana University) March 2016 - May 2017

- Led team of 5 students to collaborate with technology experts (eg. R, Python, AutoCAD) to create a total of 8 workshops, expositions, and hackathons that gathered a combined 1000+ attendees.
- Established and maintained 4 sponsorships with university faculties, companies, and other clubs.

Wet Lab Lead Bloomington, Indiana

International Genetically Engineered Machine (iGEM Indiana) March 2016 - June 2017

- Collaborated with 6 executive members to design and implement synthetic biology projects for 16 general members.
- Developed a light controlled genetic switch to control CRISPR/CAS9 gene editing (Bronze medal).
- Created biologically reactive paper sensors for cheap and eco-friendly gold detection (Bronze medal).