

# Hamza Ismail Al-Habash

Amman, Jordan ✉ [ihamzahxd@gmail.com](mailto:ihamzahxd@gmail.com) ☎ (+962) 782020659 / (+966) 507935490 🌐 <https://www.linkedin.com/in/hmz-hbsh/>  
📄 <https://github.com/Hamza-Alhabash>

## SUMMARY ABOUT ME

As a dedicated technology enthusiast with a deep passion for artificial intelligence, I have honed my expertise through significant real-world experience. My journey in the field of data science is marked by an intensive Data Science internship at Orange Coding Academy and an internship focusing on the fundamentals of AI at SHAI For AI. These experiences have not only broadened my horizons but also solidified my skills in data analysis and machine learning. My participation in hackathons and my role as a student ambassador for the Abdul Hameed Shoman Foundation demonstrate my commitment to practical application and community engagement in technology. With a strong foundation in mathematics, statistics, and programming, I am driven to constantly innovate and refine my approach to problem-solving. I am committed to continuous learning and to delivering exceptional value in my endeavors. Actively seeking opportunities to enhance and apply my skills, I am excited to explore uncharted territories in information science. My ultimate goal is to harness my skills and passion to establish my own startup in the tech realm, contributing innovatively to the ever-evolving world of technology and AI.

## EDUCATION

### Bachelor's Degree, Information Science

Al Hussein Technical University (HTU) • Amman, Jordan • 2024 • 3.72 out of 4, Distinction.

## CERTIFICATIONS

### AWS Certified Data Analytics – Specialty

Amazon Web Services (AWS)

• Currently preparing and studying to take my AWS Certified Data Analytics – Specialty Exam Soon

### Effective Communication Skills Program

Dale Carnegie Training Jordan • 2020

## EXPERIENCE

### AI Programming with Python

Bertelsmann & Udacity

• Next Generation Tech Booster Scholarship

December 2023 – Present, Remote

### Forward Learner

McKinsey & Company

November 2023 – Present, Remote

### Computer Vision Specialist

HTU AeroSquad | Technical & IT Department

October 2023 – Present, Amman, Jordan

### Data Science Scholarship

Egypt Study Camp

• Website: <https://egyptstudycamp.com/>

October 2023 – Present, Remote

### Data Scientist Intern

Orange Jordan Data Science Coding Academy

August 2023 – October 2023, Amman, Jordan

- Data Manipulation: Proficient in using Pandas and NumPy to efficiently clean, transform, and manipulate data, ensuring high-quality input for subsequent analysis.
- Exploratory Data Analysis (EDA): Refined my ability to delve into datasets, uncover hidden patterns, and extract valuable insights in addition to applying statistics and hypothesis testing to make data-driven decisions.
- Linear Algebra: I possess a solid understanding of linear algebra, a fundamental mathematical tool for machine learning algorithms and data analysis.
- Feature Engineering Expertise: The ability to identify and choose the most relevant variables or attributes for predictive modeling through techniques like Recursive Feature Elimination (RFE) and statistical approaches such as K-Best selection. In addition to feature engineering to ensure the capture of data trends.
- Model Build and Hyperparameter Tuning: Proficiency in selecting and building the ML model best fit for the task in addition to parameter tuning using various techniques.
- Key Achievement – Data Science Project (Parts 1 & 2): Collaborated with teammates on a "Credit Score Forecasting" dataset project to predict customers' credit scores.

## Data Scientist Intern

SHAI For AI

February 2023 – July 2023, Amman, Jordan

- Together with my team, we tackled the **Diamond Price Prediction** project, where we analyzed a dataset of around 54,000 diamonds. Our objective was to develop a machine-learning model for accurately predicting diamond prices. We approached this as a supervised machine learning task, focusing on multiple regression techniques. Our efforts included extensive data cleaning and exploratory data analysis (EDA) to thoroughly understand each feature's significance. We leveraged data visualization techniques to draw insightful conclusions and prepared the dataset for machine learning algorithms with careful preprocessing. Our team constructed a comprehensive pipeline, integrating all necessary preprocessing steps, and performed a train-test split for robust model evaluation. We explored, trained, and evaluated various models, including handling outliers and fine-tuning hyperparameters. To ensure the reliability of our model, we employed cross-validation techniques and concluded the project by testing and submitting our predictions on the test dataset.
- In the **Music Genre Classification** project, my team and I delved into a dataset of nearly 14,000 tracks. Our mission was to create a machine-learning ensemble capable of classifying music genres. We analyzed audio features to differentiate between different genres. The project involved experimenting with various machine learning models including LazyClassifier, Random Forest, SVM, KNN, and XGBoost, which we fine-tuned using GridSearchCV for optimal performance. Our efforts were rewarded with a high-weighted F1 score, indicating a successful balance of precision and recall in our model. We were proud to secure a good position on the leaderboard, standing out among numerous global participants and showcasing our team's proficiency in merging the artistry of machine learning with the world of music.

## Computer & Information Technology Unit Assistant

Al Hussein Technical University (HTU)

May 2021 – July 2021, Amman, Jordan

## SKILLS

Data Science / Python / Data Science Data Analytics Data Visualization / Artificial Intelligence / Machine Learning / Data Modeling / Supervised Learning / Unsupervised Learning / Big Data / Big Data Analytics / Matplotlib / Seaborn / Sentiment Analysis NLP / Natural Language Processing (NLP) / Data Mining / Jupyter Notebook / Data PreProcessing / Google Colab / Data Collection / Data Cleaning, Data Analysis, Data Visualisations / PySpark / Data Collection / Feature Engineering & Feature Selection / Data Structures & Algorithms / Scikit-Learn / Statistical Analysis / NumPy, Pandas / Data Analysis, Data Analytics / Data Governance / Exploratory Data Analysis (EDA) / Microsoft PowerBI / Business Intelligence / Data Cleansing, Data Wrangling / Statistics / Bigdata (Apache Hadoop – Apache Hive, Apache Pig) / AWS Data Analytics

### Additional Technical Skills

WordPress / Git & Githubs / User Interface Design / User Experience (UX) / Computing Education Research / Linux / Command-Line Interface (CLI) / Human-Computer-Interaction / Red Hat / Database Design & Development / Operating Systems / Internet of Things / Maths for Computing / Systems Analysis & Designs / ERP Systems / Management Information Systems / Compiler Design / Networking / Security / Entrepreneurship Bootcamp

### Communication and Interpersonal Skills

Attention to Detail / Entrepreneurship / Public-Speaking / Presentation Skills / Leadership / Communication / Perfectionist/ Problem Solving / Professional Practice

### Language Skills

Arabic: Native mother tongue

English: Advanced proficient user

## PROJECTS

### Pioneering Food Security Predictions through Big Data Analytics in Agriculture

Al Hussein Technical University (HTU) • May 2023 – June 2023

- Navigating the ever-evolving landscape of data science, artificial intelligence, and big data, I successfully conceptualized and executed a pivotal project. I harnessed weather data meticulously sourced from ArabiaWeather, a leading local data provider. The prime directive was to engineer an intricate predictive regression model. Tasked with forecasting the nuanced relationship between variable weather patterns and consequential crop yields across a diverse array of cities, the model was an amalgamation of data analytics and machine learning algorithms. The endeavor necessitated the conversion of colossal raw meteorological datasets into actionable, precise insights that could revolutionize agricultural decision-making processes. The resultant model emerged as a beacon, facilitating astute decisions to preempt waste and bolster food security. This undertaking not only showcased the transformative power of advanced analytics but also positioned data-driven strategies as indispensable in addressing global challenges like food sustenance.

### Sophisticated Data and Text Mining Framework for Sentiment Analysis: Clustering and Classification of Arabic Restaurant Reviews

Al Hussein Technical University (HTU) • December 2022 – January 2023

- In my Data Mining course, I tackled the complex task of analyzing Arabic restaurant reviews, a unique mixture of colloquial Levantine language peppered with emojis. This challenge involved standardizing, normalizing, and cleaning the unstructured text without losing its essence. I developed an unsupervised clustering model for sentiment analysis to interpret customer reviews with nuanced detail. Simultaneously, I created a comprehensive data mining application employing algorithms like K-Means, DBSCAN, and OPTICS for clustering various "posts" datasets. Also, I created an unsupervised clustering model to perform a text-mining application for sentiment analysis on customer reviews, which incorporated feature selection techniques and classification algorithms such as Random Forest and SVM. By the project's conclusion, I had a high-accuracy model capable of dissecting sentiment with nuanced granularity. This project not only honed my data preprocessing skills but also demonstrated how machine learning can illuminate the multi-layered tapestry of human emotions expressed in digital communications.

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## **VOLUNTEERING INVOLVEMENT**

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### **Student Ambassador**

Amman, Jordan • Abdul Hameed Shoman Foundation • August 2023 – Present

- I participated as a volunteer ambassador in 2023's Abdul Hameed Shoman Foundation Awards for Arab Researchers and Children's Literature. As ambassadors of the Foundation, we were given the confidence to play a critical role in the success of the event. From welcoming guests at the entrance to the Ritz-Carlton Hotel to directing them to their seating places, and even ensuring their comfort during the ceremony. The awards are presented as a tribute to individuals who have contributed to the advancement of scientific research and Arabic literature for children, highlighting their prominent roles and invaluable contributions. We had the honor of receiving guests from various parts of the Arab world, where ideas and experiences were exchanged and cultural relations were strengthened.

### **Assistant Coach**

Amman, Jordan • Mind Lab • July 2023 – July 2023

- I had the pleasure of volunteering for a whopping 28 hours at Mind Lab during their 2023 summer camp. One of the most enriching aspects was stepping into the role of guiding, managing, and educating children. It was an entirely new experience for me, and I'm elated to have added this skill to my repertoire.

### **Event Assistant Volunteer**

Amman, Jordan • Google Entrepreneurship (G ENTR) • December 2019 – January 2020