

Ibrahim Kashif

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EDUCATION

University of Manchester

Manchester, UK

BSc Mathematics

September 2024 – Expected July 2027

- Current average: 73%; on track to achieve a first-class degree.
- Relevant modules: Probability and Statistics, Stochastic Processes, Linear Regression Models, Numerical Analysis, Principles of Mathematical Modelling, Programming with Python, Partial Differential Equations & Vector Calculus, Fluid Mechanics, and Mathematical Communication and Group Projects.

EXPERIENCE

Student Project Lead – Data and Market Insights

15 June 2026 – 29 June 2026

University of Manchester Micro-Internship, delivered through Practera

Remote

- Led a seven-person consulting team to deliver a research-based customer and market insights report within a two-week deadline.
- Synthesised research findings into practical recommendations by coordinating analysis, report development and quality review across the team.
- Served as the primary client contact by organising meetings, clarifying requirements and communicating project progress and questions.
- Improved the consistency of the final deliverable by integrating the executive summary, references, research findings and recommendations into one coherent report.

PROJECTS

Properties and Applications of Quaternions | *LaTeX, Applied Mathematics Research, Group Project* 2025 – 26

- Achieved 90% for a co-authored applied mathematics research report and 90% for the accompanying presentation.
- Developed the section on quaternion representations of rotations in three dimensions, including Euler angles and gimbal lock.
- Presented advanced mathematical concepts through definitions, proofs, applications and technical writing within a five-person research team.

Quadratic Regression Analysis | *R, ggplot2, Statistical Modelling*

2025 – 26

- Modelled the relationship between baseball launch angle and horizontal distance using a quadratic regression model in R.
- Achieved $R^2 = 0.9812$ and adjusted $R^2 = 0.9775$ by fitting and evaluating the model against observed data.
- Assessed model reliability using residual plots, Cook's distance and the Shapiro–Wilk test.
- Applied the fitted model to predict distances and identify launch-angle ranges associated with target distances.

California Housing Price Prediction | *Python, Pandas, NumPy, Matplotlib, scikit-learn*

2026 – Present

- Developing an end-to-end machine-learning workflow for California housing-price prediction.
- Applying data cleaning, exploratory analysis, feature preparation, model training, validation and evaluation using Python.

NASA Fireball Data Analysis | *Python, Computational Statistics, Data Visualisation*

June 2024

- Analysed 1,000+ NASA fireball observations to investigate geographical patterns, accounting for uncertainty, observational bias and limitations in the underlying dataset.
- Grouped observations by latitude and longitude to identify spatial trends and produce statistical visualisations.
- Evaluated uncertainty, observational bias and dataset limitations in a technical report, demonstrating research judgement beyond basic data processing.

EXTRACURRICULAR ACTIVITIES

Robotics Society – Autonomous Systems Projects

December 2024 – Present

Member

- Developed and tested an Arduino-based autonomous buggy using motors and sensors; completed the maze challenge and achieved sixth place in competition.
- Completed most of the development work on C.U.B.O., an autonomous Rubik's Cube-solving robot, using Python and circuit integration.
- Integrated programming, electronics and mechanical design within a multidisciplinary autonomous-systems team.

CERTIFICATIONS

Python for Data Science, AI & Development

IBM

September 2025

Online Certification

- Applied Python, Pandas and NumPy for data cleaning, transformation and analysis.
- Implemented REST API requests and web-scraping techniques to collect external datasets.

TECHNICAL SKILLS

Languages: Python, R, SQL, MATLAB, Mathematica, LaTeX

Data Science and Machine Learning: statistical modelling, regression, exploratory data analysis, model validation, scikit-learn

Scientific Computing: numerical analysis, mathematical modelling, computational statistics, data visualisation

Libraries: Pandas, NumPy, Matplotlib, ggplot2

Developer Tools: Git, GitHub, Microsoft Excel, Microsoft Access

Hardware and Robotics: raspberry pi, sensors, motors, circuit integration