Abel Rajesh

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Personal Profile

Final-year Physics with Data Analytics student at Dublin City University (Expected grade: 1.1). Experienced in Python, SQL and data visualisation. Achieved strong collaboration skills honed through academic projects, part-time work and internships. Proven ability to manage tasks within strict deadlines and communicate effectively in team environments. Eager to apply my analytical, technical and collaborative skills to solve real-world challenges in data analysis and machine learning.

Technical Skills

- **Programming Languages:** Python, MySQL, R, HTML & CSS
- **Libraries:** Numpy, Pandas, Scikit-learn, TensorFlow
- **Software / OS:** MS Office, FreeCAD, Jupyter Notebook, GitHub, Microsoft, Linux

Education

Dublin City University   **2022 - 2026**
Bachelors in Physics with Data Analytics: Expected 1.1

Relevant Modules: Digital and Analogue Electronics, Advanced Programming, Databases and Data Visualisation, Semiconductor Physics, Machine Learning

Project(s):
Kolmogorov Flow: Performed a study on Kolmogorov flow by focusing on factors such as Lagrangian particle tracking, Reynolds number and Vorticity. Delegated tasks of project design, experimentation, data analysis and programming among team members. Designed project components using Blender and assembled equipment using soldering tools. Utilised Raspberry Pi Camera to record data and python library trackpy for data analysis. Implemented image processing techniques on recorded video frames to extract meaningful data.

Principal Component Analysis (PCA): Implemented a machine learning approach using feature extraction to cluster a multi-variable iris dataset into the iris species: Setosa, Versicolor and Virginica. Standardised the dataset and computed matrices to extract eigenvectors & eigenvalues. Utilised python libraries (matplotlib, NumPy, pandas and seaborn) for data analysis and visualisation. Plotted principal components with the highest variance to distinguish between iris species. Delivered findings through a PowerPoint presentation to peers and professors during an exhibition.

Rockbrook Park School, Dublin   **2016 – 2022**
Leaving Certificate: 542 Points

Work History

Tomra Sorting Ltd.   **February 2025 – May 2025**
R&D Intern

- Processed almond infeed using HSV colour space and DBSCAN clustering for object separation.
- Developed a low-dimensional classifier to compare almond sorting performance between SWIR and Vis-NIR imaging
- Performed image labelling for deep learning model training, improving model accuracy to 97%
- Modelled 3D components for machine testing, including fans and beam splitter brackets

Uniphar Group, Dublin 24   **July 2022 – February 2025**
Warehouse Operative

- Collaborated with supervisors and colleagues to confirm operations ran smoothly
- Catalogued general stock and ensured the placement of items in designated areas
- Conducted routine inspections of incoming and outgoing pharmaceuticals
- Maintained a clean and safe warehouse environment

Achievements

• Represented South Dublin and received 3 medals in Irish International Taekwondo Competitions
• Completed grade four in guitar with Trinity College London
• Received full driver's licence in 2023

Interests

• Active in fitness: attend Energie Fitness gym four times weekly
• Teach guitar to children in the local community
• Practice Taekwondo and Judo; regularly participate in club sessions
• Swim weekly at Tallaght Leisure Centre

Languages

• Intermediate proficiency in Spanish and Irish from secondary level education
• Fluency in Malayalam as it is my native language

References
Available on Request