

# Pratik Barve

Data Engineer at AIB

Dublin, Ireland

[✉ barvepratik96@gmail.com](mailto:barvepratik96@gmail.com) | [📞 +353 8940 65251](tel:+353894065251) | [🔗 pratik-barve](https://www.linkedin.com/in/pratik-barve/) | [🌐 iamstarstuff](https://www.github.com/iamstarstuff)

## SUMMARY

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Data professional with extensive experience in Python, data engineering, and advanced analytics. Combines a strong foundation in mathematics, physics, and statistics with expertise in statistical modeling, machine learning, and data-driven problem solving. Skilled in designing scalable ETL pipelines, performing data anonymization, and optimizing distributed systems. Proven ability to extract actionable insights from complex datasets using statistical analysis and using advance techniques like NLP and OCR, driving innovation in cross-functional environments.

## WORK EXPERIENCE

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### Allied Irish Bank (AIB)

*Data Engineer*

Aug 2025 – Present

- Build large-scale Python automation tools for data preprocessing across Payments teams, reducing analytics turnaround time.
- Use Splunk Observability, Enterprise, and ITSI for infrastructure and payment monitoring.

### Data Analyst (Technology Graduate Programme)

Sept 2023 – Aug 2025

- **Python Developer (Rotation 1):** Built and enhanced internal ETL utilities in Python, improving data processing reliability.
- **Splunk Developer – Payments Assurance (Rotation 2):** Designed dynamic Splunk dashboards and integrity alerts for SWIFT, SEPA, and Instant Payment monitoring, reducing MTTR by 25%.
- **Data Engineering & Observability (Rotation 3):** Used Splunk Observability and OpenTelemetry for microservice monitoring; implemented NLP-based PII anonymization using Microsoft Presidio.

### Indian Association of Physics Teachers (IAPT)

*Python Tutor (Multiple workshops)*

Dec 2024, Jun 2023, May 2021

- Taught Python for scientific computing and astronomical data analysis at Winter Schools & Summer schools using NumPy, Scipy, Matplotlib, Pandas, and Astropy.

### Northwestern University

*Teaching Assistant (Code/Astro 2023)*

Jul 2023 (1 month)

- Assisted participants in publishing Python packages on PyPI and documenting them with ReadTheDocs.

### Tata Institute of Fundamental Research (TIFR)

*Research Project - Department of Astronomy & Astrophysics*

Jan 2021 – Sept 2022

- Estimated FRB detection rates and optimized radio telescope array design for astrophysical event detection.

### Master's Thesis – Department of High Energy Physics

Jan 2019 – May 2019

- Fabrication and characterisation of Resistive Plate Chambers for Cosmic Muon Tracker.

### Internship – Department of High Energy Physics

Apr 2016 – May 2016

- Determined the muon lifetime using stopped cosmic muons in a plastic scintillator detector.

## EDUCATION

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<b>South East Technological University</b>	2022 – 2023
<i>MSc in Data Science</i>	
<b>Somaiya Vidyavihar University</b>	2017 – 2019
<i>MSc in Physics</i>	
<b>Wilson College, Mumbai</b>	2014 – 2017
<i>BSc in Physics</i>	

## CERTIFICATIONS

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- Splunk Core Certified Power User
- Splunk IT Service Intelligence 4.15
- Build a Data Science Web App with Streamlit and Python
- Data-driven Astronomy
- Classify Radio Signals using Keras

## SKILLS

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Python, Splunk Enterprise, Splunk ITSI, Splunk Observability, SQL, ETL Pipelines, Data Engineering, Machine Learning, OpenTelemetry, Data Anonymization (Presidio), Astropy, NumPy, Matplotlib, Pandas, SciPy, Plotly

## PROJECTS

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### Maglimit

[Maglimit Github Repo](#)

Published a Python package on pypi as a part of [CodeAstro](#) Workshop conducted by Caltech in 2022. It is a package to determine observability of an astronomical object using its magnitude and telescope's limiting magnitude.

### PhysicStuff

[PhysicStuff Github Repo](#)

Owner and author of [PhysicStuff.com](#), an informative Physics website. I have also curated a Github repo with interesting Physics and Math visualisations created in Python.

## LANGUAGES

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English (Full Professional), Marathi (Native), Hindi (Native)