

Rubiscape Data Lab Success Story

A Deep Dive into the Rubiscape Data Lab at university.

Building the Future of Data Science

The university, located in Pune, India, boasts a long tradition of academic excellence, fostering young minds for over 40 years. Its esteemed alumni network, exceeding 100,000 strong, thrives globally. The institution continuously embraces new technologies to equip students with skills needed for a dynamic world.

Recognizing the power and the future potential of AI and Data Science in the field of multi-disciplinary engineering, the Department of Electrical & Electronics Engineering (EEE) of university took an initiative to set up a Data Science lab as a step towards becoming a leader in data-driven education and research.

University selected Rubiscape as its industry-academia partner for its focus on the multi-disciplinary and future-tech approach, that is well aligned with it's mission of developing future ready innovative young leaders.

Cultivating a Research Driven Ethos

Building In-Demand Skillsets

- **Developing In-Demand Skills:**
Graduates with skills sought after in various industries.
- **Hands-on Experience:**
Students gain proficiency with AI-ML & Data Analysis Tools and Algorithms.

Faculty Development

- Mentorship opportunities enhance faculty knowledge and skills in data science and AI.
- **Improved Curriculum:**
Insights from collaborative projects inform curriculum development.

Mentorship



Expert guidance nurtures research methodology, critical thinking, and problem-solving skills.

Research Publication



Joint research projects can lead to co-authored publications.

Preparing for Future Careers

Building a Strong Portfolio



Research projects showcase students' skills and experience.

Industry Exposure

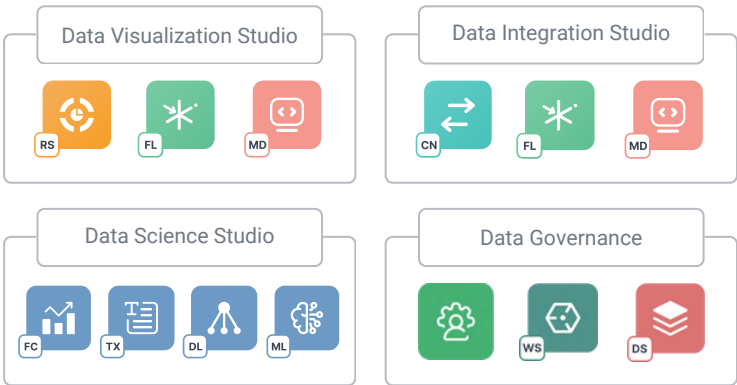


Internships and project collaborations provide real-world industry experiences.

■ Bridging the Gap: Industry Academia Collaboration

Features	Description
Learning Experience	Access to industry-backed curriculum and assessments through the 'Data Science Knowledge Cloud' and online LMS virtual classrooms.
Project-Based Learning	Students engage in real-world data science projects, capstone projects using Rubiscape's platform, and major projects focused on multiple domains.
Research and Innovation	Faculty and students collaborate with Rubiscape researchers on joint publications and participate in co-organized innovation challenges.
Deep Learning	Provides a platform for project-based learning, expert mentorship, and real-world applications, fosters innovation and collaboration to integrate AI and computer vision.
Contribution	Contributes to skilled workforce development, driving innovation and economic growth in India.

Data Science Lab



Compute Environment

Software – Docker v 20.10.21, Rubiscape Release 3.3.2, Postgres 13, Ubuntu 20.04, Python 3.11.3

Libraries - Tensorflow, Kersa, Pytorch, scikit-learn, pyLDAvis, Gensim, Scipy, Numpy, OpenCV, LightGBM, Pyspark, Darts, NLTK, Gensim, CoreNLP, Spacy, Deepface

Server - 2x Intel® Xeon® Silver 16 Cores Processor
4 x NVIDIA® RTX A6000 PCIe Gen 4 – 46GB, 256GB DDR4 ECC RAM

Joint Certification Program

Specialised tracks for faculty development program as well as technical certification tracks

Data Visualization
with RubiSight

Seamlessly visualize and interpret your data.

Data Science
with RubiStudio

Streamlined Model Builder Train, Test, and Deploy with Ease

Data Engineering
with RubiFlow

Effortlessly create pipelines with drag-and-drop interface.

IoT Analytics
with RubiThings

Harness Connected Intelligence for IoT Applications

■ Data Lab for Students: Shaping Future Data Scientists

Features	Description	Lab Exercise
Statistical Analysis	Solutions to applied problems using variety of statistical software packages	Normality tests, Hypothesis testing and correlational analysis
Python Programming	Tasks automation and data analysis	Programming fundamentals like conditional logic, looping and functions
Machine Learning Fundamentals	Identify problem statement, choose the right algorithm, tune parameters and model validation	Programming fundamentals like conditional logic, looping and functions
Impact	Complex patterns recognition, accurate predictions and tasks automation	Patterns recognition ad Neural networks functioning in large datasets



Voice from the Data Lab



I am thrilled about the our collaborative efforts with Rubiscape to establish a forward-looking Data Lab, focusing on Data Science and AI-ML. This initiative not only aligns with our commitment to advancing research and education but also reflects university's dedication to staying at the forefront of technological advancements.”

The Dean
Professor & Dean of Academics

Research Publications

by EEE Department Data Lab

- Credit Risk Analysis
- Pune Air Quality Index Monitoring
- Diesel Engine Fault Detection
- Winton Stock Market Prediction - Forecasting
- Nifty Closing Price Prediction

- Loan Approval Analysis
- Automated Fault Detection
- Sales forecasting and Inventory Management
- Heart Stroke Analysis
- HR Data Analysis
- IPL Data Analysis

A Beacon of Hope: Inspiring the Next Generation

The Rubiscape Data Lab, is not just a facility but also a beacon of hope for a future driven by Data Science innovation. It nurtures young minds, fosters collaboration, and develops cutting-edge solutions, shaping India's data science future and inspiring a generation to embrace technology's transformative power and positively impact the world.