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Lumen Data Science Program

Transform Data into Innovation. Transform Your Career.

Top choice for maths & stats lovers

Program Overview

The Lumen Data Science Program is a cutting-edge, industry-aligned bootcamp designed to equip learners with the skills needed to excel in data science, machine learning, and AI-driven decision-making. The program emphasizes hands-on learning, real-world applications, and modern tools, ensuring participants are job-ready upon completion. With a focus on cloud-based ML deployment, feature engineering, and AI best practices, this program prepares learners to tackle complex data challenges and drive innovation in their organizations.

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Key Details

Duration

Full-time: 6 months

Part-time: 12 months

Mode

100% Online

Instructor-led classes

Languages

English, German

Key Details

Internship

- One-month internship
- Work on a real-world project
- External (tech company) or internal (Lumen program)

Mentorship

- Dedicated technical mentors
- Branding coaches
- Industry experts

Curriculum

Combines industry relevance with practical and theoretical depth.:

- **Expertly Crafted:** Designed with input from Fortune 500 experts (Meta, Amazon).
- **Insights from Senior Leaders:** Contributions from top-tier professionals, including CTOs, VPs, and Entrepreneurs.
- **Academic Excellence:** Enhanced by University Professors for academic rigor.

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Program Structure

Foundation

Build a strong foundation in data science fundamentals, tools, and techniques.

Brilliance

Develop advanced data science skills and apply them to real-world problems.

Mastery

Master advanced topics and prepare for job placement.

Foundation – 12 Weeks

Technical Curriculum

- Python Fundamental for Data Handling: Pandas, NumPy
- Exploratory Data Analysis (EDA) & Data Cleaning
- Data Visualization Libraries: Matplotlib, Seaborn, Plotly
- Statistical Analysis
- Git & GitHub for Version Control
- Introduction to Cloud Platforms
- Data Collection from External Sources and APIs: BeautifulSoup
- Supervised & Unsupervised Learning: scikit-learn
- Regression, Classification, Clustering, Reinforcement Learning
- Model Evaluation & Performance Metrics
- Co-pilot for data science

Business Acumen & Professional Skills

- Communicating Data Insights Effectively
- Understanding Business Metrics & KPIs
- Introduction to Data Ethics & Responsible AI
- Industry-Specific Applications (Finance, Marketing, Healthcare, etc.)

Personal Branding and Job Preparation

- Identifying career goals
- Shortlist your dream companies
- Developing job search strategy
- Crafting Resume for Data Science Roles
- Setting up LinkedIn and Github

Brilliance – 8 Weeks

Technical Curriculum

- Deep Learning: Tensorflow, keras
- Neural Networks, CNNs, RNNs, Transformers
- Large Language Models (LLMs), Generative AI, RAGs
- Generative Pre-trained Transformers (GPTs), hyperparameter tuning
- Feature Engineering & Selection Techniques
- Time Series Forecasting & Anomaly Detection
- Data Science Workflow Automation
- Cloud-Based ML Deployment
- AI-Augmented Data Science

Business Acumen & Professional Skills

- Presenting Insights to Executives & Stakeholders
- Project Management in Data Science
- Measuring ROI and Communicating Business Impact

Personal Branding and Job Preparation

- Building a compelling portfolio
- Optimizing LinkedIn & GitHub Profiles
- Building your Network
- Establishing your professional brand
- Using AI tools for effective job search and personal branding

Mastery – 4 Weeks

Technical Curriculum

- Applied AI: Computer Vision, Natural Language Processing
- Prompt Engineering
- Data Engineering
- MLOps & Model Deployment: Docker, Kubernetes, MLflow,
- Cloud Functions
- Ethical Considerations in AI – Fairness and Bias in data

Business Acumen & Professional Skills

- Advanced Business Intelligence & Strategy
- Developing data-driven mindset
- AI Governance & Compliance
- Strategic Thinking & Business Alignment

Personal Branding and Job Preparation

- Intro to Freelancing & self-employment
- Writing cover letters and proposals that stand out
- Mock Interviews & Feedback Sessions
- Salary Negotiation Strategies
- Developing professional development roadmap

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Tools & Technologies

1 **Programming**

Python, Jupyter Notebook/ Google Colab, Git

2 **Data Handling**

Pandas, NumPy, BeautifulSoup

3 **Machine Learning & AI**

Scikit-learn, TensorFlow, Keras

4 **Reporting & Dashboarding**

Matplotlib, seaborn, Data Studio

5 **Cloud & Deployment**

AWS/Azure/Google Cloud, Docker, Kubernetes

Career Pathways

- Data Scientist
- Machine Learning Researcher
- AI Specialist
- Data Engineer
- Business Intelligence Analyst
- AI Research Scientist

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Join the Lumen Data Science Program Today!

Gain in-demand skills, work on industry-standard tools, and build a career in Data Science.

Apply now to get started!

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