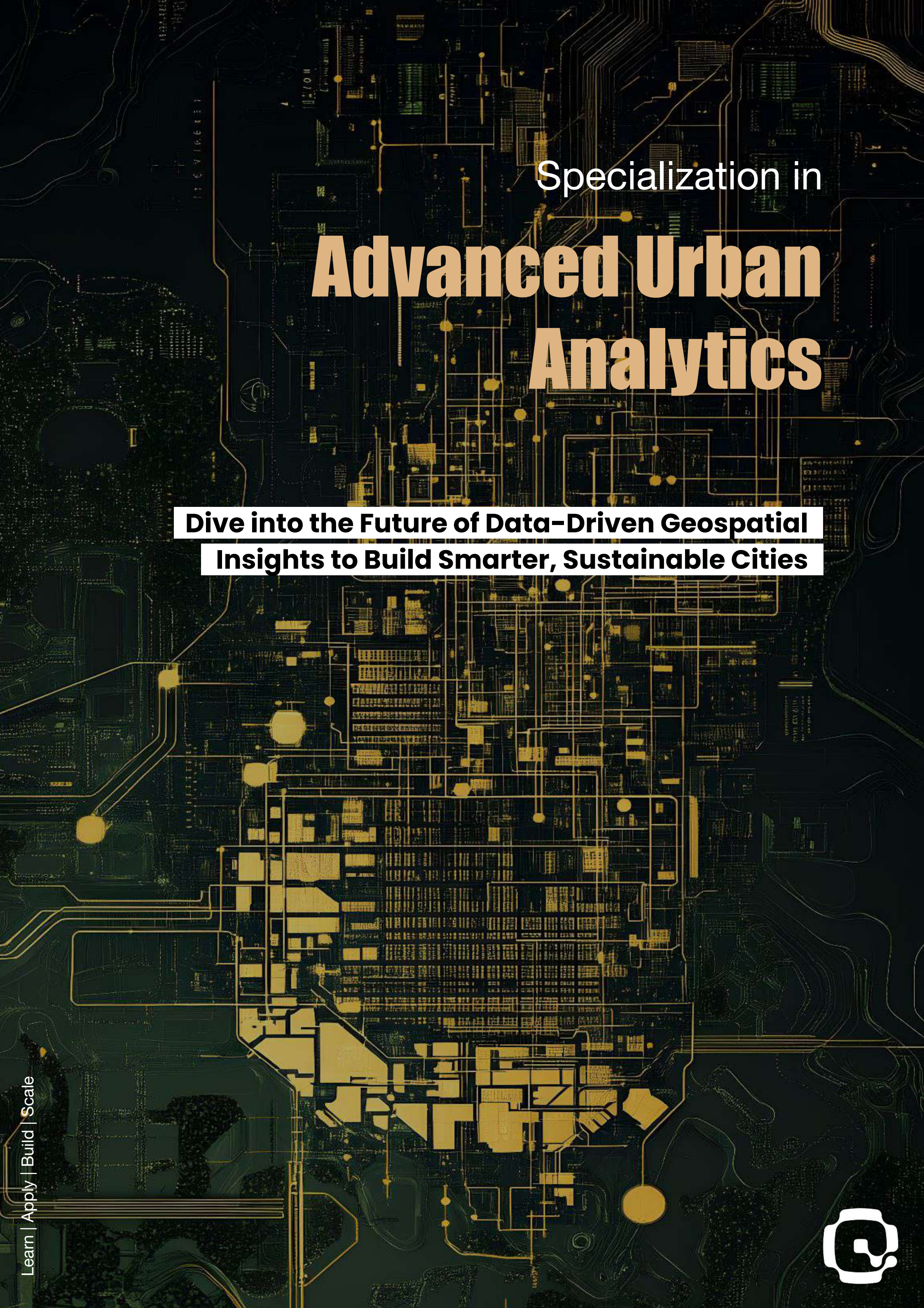


An aerial photograph of a city, likely San Francisco, with a complex network of yellow circuit lines overlaid on the map. The lines connect various points across the city, symbolizing data flow and urban connectivity. The background is a dark, textured map with green areas representing parks and water bodies.

Specialization in **Advanced Urban Analytics**

**Dive into the Future of Data-Driven Geospatial
Insights to Build Smarter, Sustainable Cities**



@ L.A.B.S is your Launchpad to lead the future of Design and Technology



We are an Action Oriented Lab for Advancements in Design & Technology



Ideas Powered by technology | Design meets Data | Global Mentors



**Real World Projects | Industry Ready learning | Tech Driven
Workflows**



COURSE DESCRIPTION



[Click to view Video](#)

WHAT IS ADVANCED URBAN ANALYTICS PROGRAM BY @L.A.B.S. ?

Unlock the Power of Geospatial Analytics

Explore advanced tools like GIS, satellite imagery, and spatial data to revolutionize urban planning and infrastructure development

Lead with Data-Driven Urban Strategies

This course empowers professionals to harness data-driven insights for sustainable, efficient, and forward-thinking city planning

Design Resilient, Future-Ready Cities

Optimize urban systems by integrating geospatial data into decision-making, improving resource management, and enhancing resilience to climate challenges



FEATURES

DISCOVER

20⁺ *SOFTWARES*

10⁺ *PLUGINS*

5⁺ *CODE PLATFORMS*

5⁺ *AI MODELS*

DEVELOP

Seamless AI Workflow Integration

Dashboard Design And Development

Python For Advanced Analytics

Pitching Techniques Urban Proposals



INDUSTRY

DATA
ANALYTICS
EXPERTISE

INTEGRATION
OF ADVANCED
AI TOOLS



RISING URBAN
COMPLEXITIES

REQUIRED
INFORMED
DECISION
MAKING

Fuel Your Career with In-Demand Skills in
Geospatial and Data-Driven Urban Planning

GAIN COMPETITIVE ADVANTAGE

With

Data analytics & Artificial Intelligence



CAREER

DRIVE IMPACT

CREATE

Data Driven
Strategies

CURATE

Geospatial
Insights for
Smarter
Decisions

CULTIVATE

Sustainable
Urban Growth
and Resilience

FIRMS



PROFESSIONAL ROLES

Geospatial Data Scientist	Urban Policy Analyst
Urban Systems Modeler	Urban Data Analyst
Data Visualization Specialist	AI Planning Consultant



FRAMEWORK



Learn From the Global Experts

Experts from multidisciplinary fields



Practical Skills Development

Industry – Aligned Applications



Career Guidance

Customized Career Development Plans

PEDAGOGY

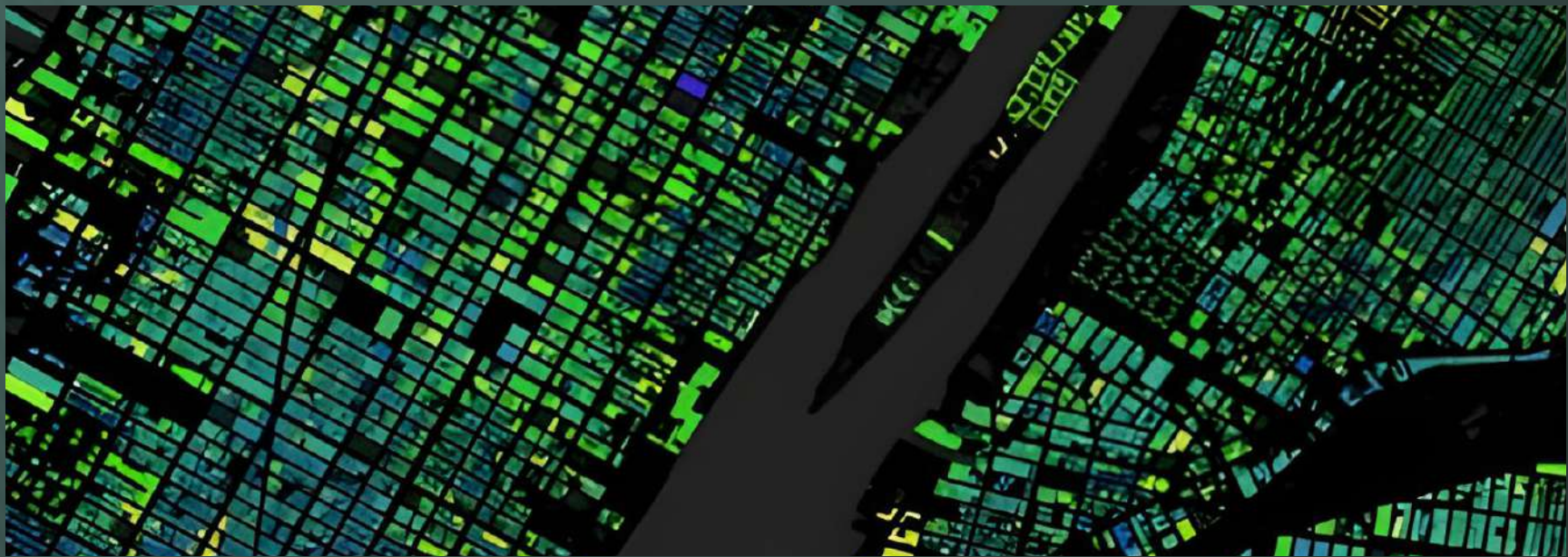
- **LIVE CLASSES** : All classes are conducted live
- **FREQUENCY** : 2 classes per week, Each class is 2 hrs
- **STRUCTURE** : Organized into 4 modules – Beginner to Advanced
- **SUPPORT** : Each module includes support and query sessions
- **TOTAL DURATION** : 50+ hrs over 12 Weeks



CURRICULUM

LEARN - Foundation

Build a strong foundation in big data, geospatial systems & visual mapping



Introduction to Big Data

- ❑ **DEFINITION & PRINCIPLES** : Definition, Principles, and Evolution
- ❑ **APPLICATIONS** : Data applications across urban and allied industries

Big Data & Urbanism

- ❑ **URBAN APPLICATIONS** : Big data applications in urban systems
- ❑ **TIMELINE** : Evolution of geospatial methods and techniques
- ❑ **SMART CITIES** : Big data utilization in the development of smart cities

Open Data Repositories & Frameworks

- ❑ **DATA SOURCES** : Identifying sources for Open geospatial datasets
- ❑ **DATA COLLECTION** : Techniques for collection from various platforms
- ❑ **DATA FORMATS** : Understanding data formats & structures
- ❑ **DATA BUILDING** : Building geospatial datasets from scratch

Mapping and Geospatial Data Representation

- ❑ **MAPPING THEORY** : Theory of mapping and its role in spatial analysis
- ❑ **FORMAT EXPLORATION** : Exploring vector and raster data formats
- ❑ **FEATURE TYPES** : Presentation & application of point, line & polygon data
- ❑ **VECTORS** : Visualization Techniques for representing geospatial data

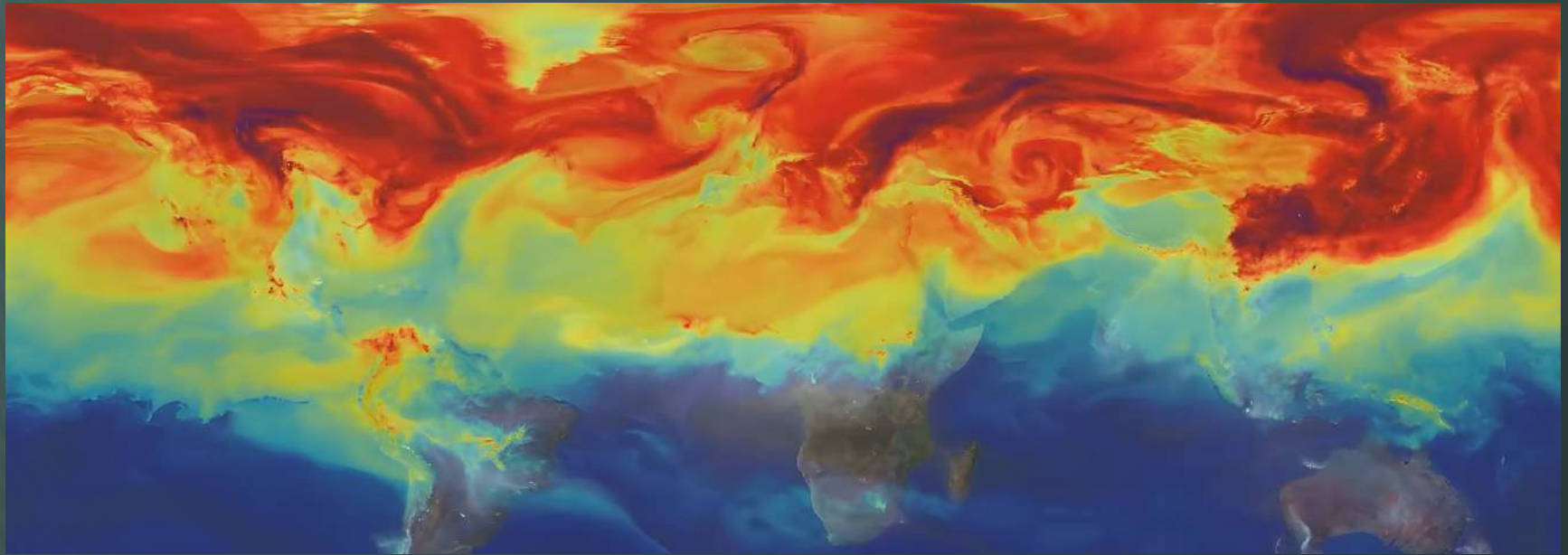
QGIS | Google Earth Engine | OSM (OpenStreetMap) | Excel | QuickOSM



CURRICULUM

APPLY - Intermediate

Apply geospatial knowledge through GIS tools and real-world workflows



Geospatial Data Processing with GIS

- ❑ **IMPORT** : Importing various data types into QGIS (vector, raster, etc.)
- ❑ **INTERPRETATION** : Interpreting vector and raster geospatial data
- ❑ **SYSTEMS** : Understanding coordinate systems and projections in GIS
- ❑ **COMPARISON** : Overlaying multiple geospatial datasets for analysis

Data Transformation & Conversion

- ❑ **VALUE TYPES** : Qualitative, quantitative, continuous, discrete data
- ❑ **CONVERSION** : Conversion methods for data types
- ❑ **DATA CLEANING** : Dealing with NULL or no data values
- ❑ **SPATIAL SQL** : Data Manipulation, Querying, Filtering, streamlining

Real World Project Setup

- ❑ **SDG CONTEXT** : Project theme emphasizing on SDG goals by the UN
- ❑ **PLUGINS** : processing Plugin (QuickOSM, Travel Time, QNET)
- ❑ **ADVANCED ANALYTICS** : Network Analysis, Spatial Interpolation, Hotspot Analysis, Accessibility Analysis, Hydrological Modeling

Solutions and Strategic Outcomes

- ❑ **POLICIES** : Streamline design by aligning with Government policies
- ❑ **STRATEGY** : project strategy based on analyzed data & regulations
- ❑ **COMMUNICATION** : non-spatial representations & Graphs for feedback

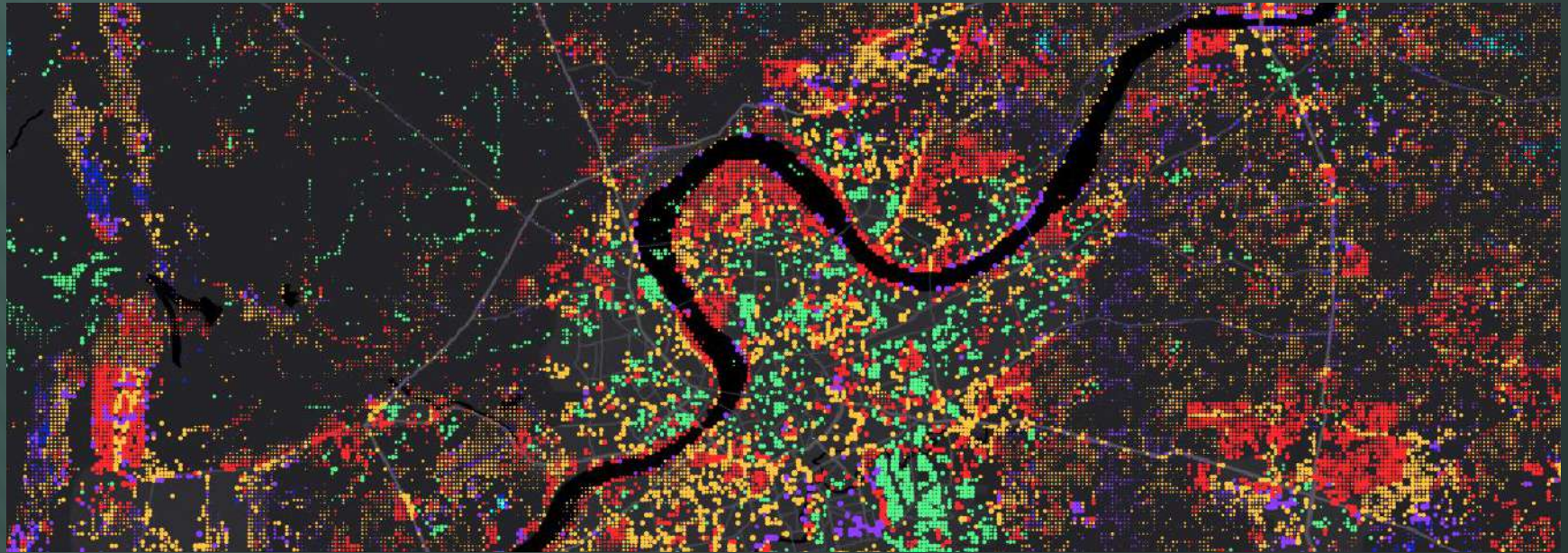
QGIS | QuickOSM | TravelTime Plugin | QNET | SQL | OpenStreetMap
(OSM) Network & Accessibility Analysis | Rhino | Grasshopper



CURRICULUM

BUILD - Advance

Leverage Python to analyze, visualize, and apply geospatial intelligence at scale.



Introduction to Python

- ❑ **DATA SCRIPTING** : Scripting to collect data from satellite imagery, APIs
- ❑ **WEB SCRAPING** : Data Scraping with Python using Scrapy
- ❑ **JAVASCRIPT** : Google Earth Engine for large-scale geospatial analysis

Data Visualization with Python

- ❑ **MANIPULATION** : Clean datasets for analysis using pandas
- ❑ **LIBRARIES** : Employ geopandas & libraries for transforming & handling
- ❑ **CHARTING** : Visualizations with matplotlib & seaborn for presentations

Spatial Analysis with Python

- ❑ **SPATIAL JOINS** : Perform spatial joins to combine datasets
- ❑ **PROXIMITY** : Conduct proximity and distance analysis with scipy.spatial
- ❑ **INTERACTIVE MAPPING** : Visualize trends with folium, matplotlib, & plotly

Advanced Applications and Case Studies

- ❑ **CHANGE DETECTION** : Analyze urban & land-use changes with Rasterio
- ❑ **LOGISTICS** : case studies in logistics & planning for optimized routing
- ❑ **INSIGHTS** : Advanced techniques for practical data-driven insights

Python | Pandas | Geopandas | Scrapy | Matplotlib | Seaborn | Plotly
Folium | Rasterio | Scipy | JavaScript | Jupyter Notebooks | Google API



CURRICULUM

SCALE - Expert

Use AI to decode patterns, build urban dashboards, & pitch data-driven urban strategies.



Exploring AI in Geospatial Analysis

- ❑ **SAM** : (Segment Anything Model) for satellite & street-level imagery
- ❑ **SEGMENTATION** : Leverage AI to segment spatial features of land uses
- ❑ **AI-DRIVEN STRATEGIES** : for a more comprehensive geospatial analysis

Leveraging AI to Identify Patterns and Behavior

- ❑ **CLUSTERING** : K-means & hierarchical clustering to identify patterns
- ❑ **ITERATIONS** : Test AI models, iterate & interpret to refine approaches
- ❑ **DECISIONS** : Leverage clustering results to inform decision-making

App Development: Decision-Making & Participatory

- ❑ **DASHBOARD** : Dashboard development for project visualization
- ❑ **REPRESENTATION** : Tableau for publishing & sharing your project
- ❑ **PUBLISHING** : designing interactive & informative dashboards

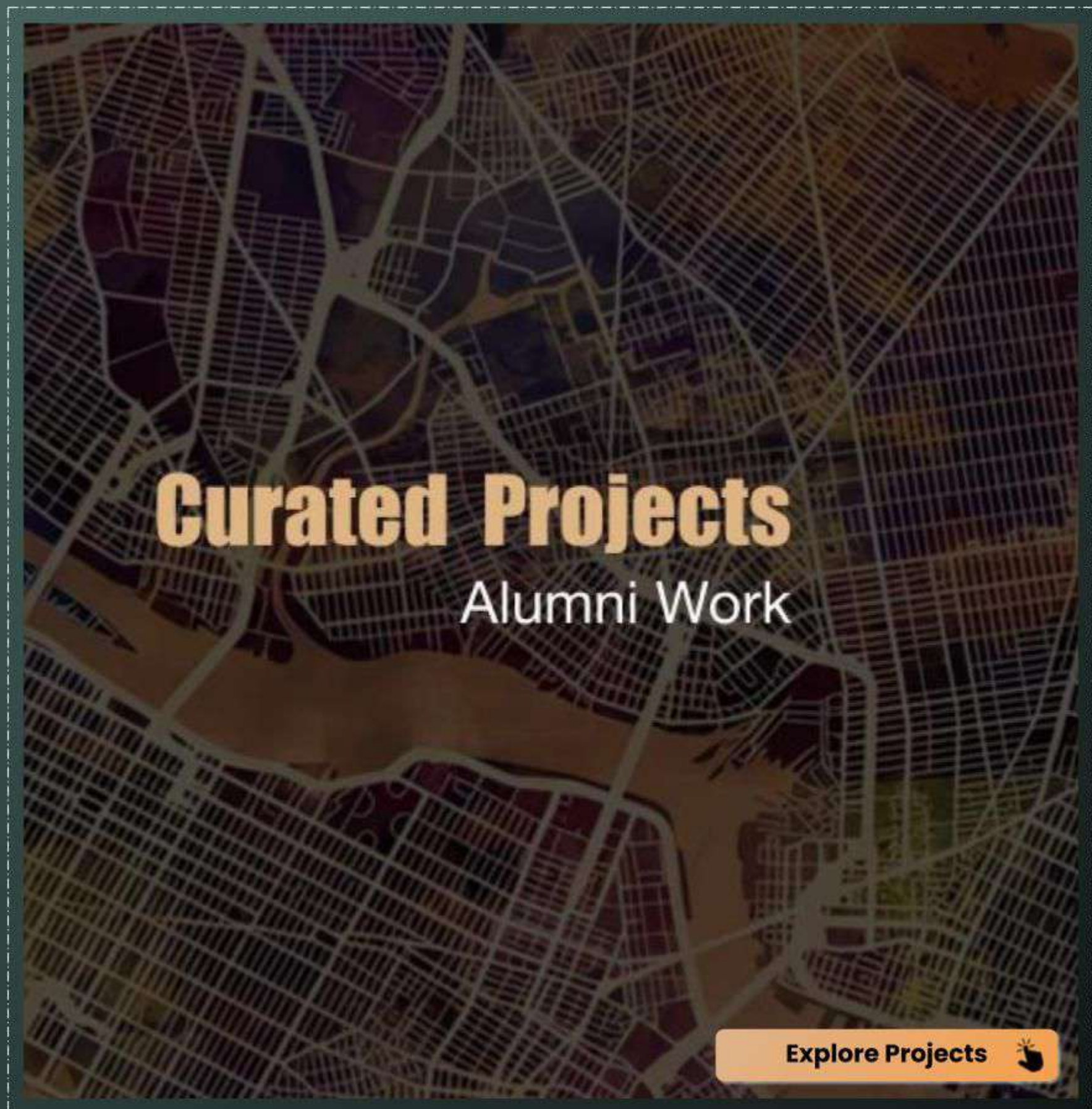
Pitching and Implementing Urban Proposals

- ❑ **PITCH DECK** : Learn pitching techniques for presenting Urban projects
- ❑ **BUSINESS** : Successful case studies of big data applications
- ❑ **NETWORK** : with industry experts to enhance collaboration opportunities

Scikit-learn | Tableau | K-means Hierarchical Clustering | Segment Anything Model (SAM) | OpenCV | Satellite Imagery APIs



PROJECTS



We extend our sincere appreciation to our alumni for their dedication and effort throughout the cohort. The work presented here reflects not just learning, but the ability to apply complex tools and data to real-world urban challenges. Your contributions have been instrumental in shaping this collective output.

Our mentors bring together a diverse, multidisciplinary, and global perspective, guiding the cohort through complex urban challenges. Their expertise and real-world experience have been instrumental in shaping the depth and quality of the work presented.

CURRICULUM

@ LABS Personalized Learning

The @LABS Personalized Learning Track is an add-on offering 1-on-1 mentorship with a global expert to work on a project or skill of your choice

PERSONALIZED TRACK FLOW



Define Path

Select your focus area
Match with a mentor and set clear goals



Build & Refine

Attend mentor-led working sessions
Submit final work and receive expert feedback

CUSTOM LEARNING, REAL IMPACT

- **PERSONALIZED LEARNING** : Focused growth in your area of interest
- **EXPERT GUIDANCE** : Expert feedback tailored to your goals
- **STRONG PORTFOLIO** : Portfolio-quality output with mentor backing
- **REAL EXPOSURE** : Exclusive networking & publishing opportunities



CAREER SUPPORT

@ LABS Career Support & Networking

Helping learners and professionals explore curated, Career paths, Access mentorship, and Build Global networks

whether you're

Emerging Professional | Upskilling | Shifting Domains

HIGHLIGHTS

Career Consultations

Personalized guidance on your goals, strengths, and roadmap

Application Support

Expert reviews for your CV, SoP, portfolio, & LinkedIn

Global Connect Network

Curated Introductions to firms, labs, and institutions worldwide

Masterclasses & Panels

Live sessions with global experts in AI, urbanism, design, and more

Global Program Guidance

Support for applying to master's, fellowships, or PhDs

Career Clarity | Global Exposure | Personal Branding
Lifelong Access | Expert Guidance | Curated Connections

You don't need to be enrolled in a course to participate, This program is open to all



MENTORS



Maria Augusta Kroetz

Mobility Planner
Urban AI Specialist



Pushkar Runwal

Teaching Associate
Urban Technology Consultant



Kriti Nirmal

Urban Policy Analyst
Digital Governance Specialist



Dimitris Lampriadis

Data Analytical Engineer
Urban Technologist



Disha Shetty

Environmental Analyst
Building Performance Analyst



Ocean Jangda

Real Estate Specialist
Urban Technologist



MENTORS



Aishwarya Arun

Computational Designer
Tech Developer



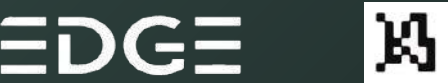
Vasudha karnani

Architectural Technologist
AI Optimization Specialist



Karim Abillama

Urban Design Strategist
Landscape Architect



Hiranya Ganatra

Spatial Data Analyst
Urbanist



Yohan Wadia

Geospatial Analyst
AI Specialist



Parshav Sheth

Big data Analyst
Academician



TESTIMONIALS



Diahyan Kapse

Final Year student - Balwant Sheth
School of Architecture, Mumbai

I thoroughly enjoyed the @LABS. course due to its unique structure connecting professional practitioners with invaluable field insights. It brilliantly demonstrated how technical statistical data can be analyzed three-dimensionally and presented visually. The meticulously formulated data repository has provided a clear, broader extension to my learning, enabling deeper exploration into analytics. The analytics content is exceptionally strong and well-coordinated, delivering profound on-ground urban analytics backed by robust academic strength!



Khushii Doshi

Final Year Student - Balwant Sheth
School of Architecture, Mumbai

Being part of @L.A.B.S. transformed the way I approach design and data. This move beyond intuition and learn how to analyse and translate urban data into clear design decisions. Advanced GIS, Grasshopper-based street analysis, and access to reliable Indian datasets made my work more data-driven and presentation-ready. What stood out most was how complex data including Climate AI workflows using Earth Engine and Google APIs was broken down into clear, usable narratives, strengthening my overall approach to urban design.



Nikhil Ahir

Urban Planning Master Student -
IDPT SCET, Surat

Enrolling in the course was a transformative experience that introduced me to data-driven urban planning and its role in informed decision-making. Interacting with experienced professionals bridged theory with real world practice, while a strong focus on data visualisation and communication helped translate insights effectively. Working with AI and open-source urban datasets significantly expanded my skill set and perspective.



Manmath Dhongle

Master Student - D.Y.Patil School,
School of Architecture, Navi Mumbai

I had a fantastic time at the workshop at DY Patil School of Architecture with @L.A.B.S., where I discovered how AI can transform our understanding of urban environments! I didn't just work with AI; I lived it! We explored how AI breaks down different parts of a city into colorful sections, making analysis fun and easy. The AI-generated visuals really brought the layout to life. Overall, it was an enlightening experience, and I loved the insights shared during the session!



Acho Bhargavi

Urban Design Master Student -
CEPT, Faculty of Planning,
Ahmedabad

Engaging with @L.A.B.S. has been a transformative experience in my journey as an urban design student. The workshops bridged design thinking with emerging technologies, showing how AI and data-driven tools can inform urban analysis and decision-making. The hands-on approach stood out, with complex concepts broken down into intuitive workflows that were easy to apply in studio and research. This experience strengthened my analytical and graphic skills and reshaped how I view the future of urbanism.



Dev Surti

Urban Planning Master Student -
IDPT SCET, Surat

The Urban Analytics course at @LABS was an eye-opening experience and, at times, overwhelming in the best way. It completely changed how I look at data not just as numbers, but as something that can genuinely shape better urban decisions. Working with real-world use cases and learning how AI fits into planning made me realize how important these skills are for the future. The hands-on learning and constant support at @LABS made even complex ideas easier to understand and truly future-ready.



PROGRAM INVESTMENT

INDIA

Total Program Fee

₹ 89,000

(Incl. Taxes)

ABROAD

Total Program Fee

\$ 990

(Incl. Taxes)

EMI plans starting at

₹4,500 / month

If you need to Avail EMI Options Reach out to us and
our support team will guide you

Payment Types Accepted





LABS

EMPOWERING INNOVATION IN DESIGN & TECH

THROUGH REAL-WORLD EDUCATION

Start Application



Contact us



*To know more about Enrollments contact us at
admin@labsonline.in or 91 95452 30508*

