Noam Gal

GitHub | LinkedIn | noamjgal@gmail.com

TECHNICAL SKILLS

Languages: Python, JavaScript, SQL, HTML/CSS
Familiar Tools: Docker, Git, Jira, Postgres, PostGIS, AWS, ArcGIS Pro, QGIS, Jupyter, VS Code, MS Excel, Figma, Hugging Face, ollama
Core Competencies & Interests: Machine Learning, ETL Pipelines, Spatial Analytics, Data Visualization, Remote Sensing, Communication, Agile Development

EXPERIENCE

Negev Urban Research (MIT City Science Lab) Beer Sheva, Israel
Geospatial Data Scientist July 2024 – Present

- Developing urban simulation models in Python to optimize infrastructure planning for 50,000+ users of the Beer Sheva Innovation District that leverage Hugging Face AI models to predict mobility patterns
- Implemented an ETL pipeline in Python for urban mobility data, performing advanced geospatial analytics to cluster travel patterns, calculate catchment areas, and generate synthetic trip routes
- Engineered a web-based geospatial analytics platform using JavaScript (React, deck.gl) and HTML/CSS to create interactive 3D visualizations of mobility patterns, enabling data-driven planning decisions

Hebrew University of Jerusalem Jerusalem, Israel
Teacher Assistant October 2024 – Present

- Taught spatial statistics exercises to MA students in the Smart Cities & Urban Informatics program

Research Scientist January 2024 – July 2024

- Built an ETL pipeline and designed supervised learning models for geospatial, physiological, and digital usage data for studies conducted in the Urban Vitality Laboratory
- Lead-authored and co-authored two research papers on interactions between health and smart city environments that are currently under peer review

Polymath Jr. (National Science Foundation REU) Remote
Machine Learning Undergraduate Research Assistant June – August 2022

- Coauthored paper “A generative flow for conditional sampling via optimal transport” presented at NeurIPS 2023, focusing on optimal transport methods for probability density mapping
- Built an Input Convex Neural Network from scratch with PyTorch using a custom loss function to find optimal maps between sample distributions

New York City Mayor’s Office of Workforce Development New York, NY
Data Analyst Intern September 2021– May 2022

- Analyzed and maintained a workforce development spending relational database for regulatory compliance
- Managed a cross-departmental project that created a fiscal planning report for $300 million of federal funds
- Conducted and analyzed opinion surveys of stakeholders that led to over $10m redistribution of spending

EDUCATION

Master of Arts in Urban Informatics Grade: 96/100
Hebrew University of Jerusalem | Rothberg International School | *Fulbright Scholar Class of 2024
Bachelor of Science in Mathematics and Urban Economics Grade: 3.98/4.0
Macaulay Honors College at Baruch College (CUNY) Class of 2022
Awards: Fulbright Israel Master’s Degree Fellowship, Summa Cum Laude, Macaulay Provost Award, National Collegiate Honors Council Portz Fellowship, Macaulay Honors Scholarship