Max Bahar (he/him)

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SUMMARY

- Graduate student in data science at Harvard with 3 years of professional experience in geospatial analysis; passionate about leveraging data to create actionable insights and drive innovation in fast-paced environments.
- Proven ability to design and deploy data-driven solutions, specializing in machine learning, mathematical modeling, and algorithm development, demonstrated through rigorous graduate coursework and projects.

EDUCATION

Harvard University Expected: May 2026
M.S. Data Science
Relevant Coursework: Data Science I, Mathematical Modeling, Visualization

Boston College May 2021
B.A. Economics and Computer Science
Relevant Coursework: Algorithms, Computability and Computational Complexity, Econometric Methods

TECHNICAL SKILLS

Programming and Tools: Python (Pandas, NumPy, SciPy, Scikit-learn, Matplotlib), Maptitude, Git, Tableau
Specialized Skills: Machine learning, data visualization, mathematical modeling

PROFESSIONAL EXPERIENCE

Caliper Corporation July 2021 - June 2024
Analyst, Maptitude Mapping Software

- Automated data pipelines using Python and GISDK to process FFIEC banking compliance datasets (up to 3 million records), enabling seamless integration with Maptitude and enhancing geospatial analysis efficiency.
- Coordinated complex multi-phase projects, managing data processing, client engagement, and user experience design to deliver high-quality geospatial solutions for Fortune 500 clients and government organizations.
- Led consulting projects for diverse stakeholders, including voter data integration, sales territory optimization, and streamlining geospatial workflows, incorporating custom metrics to improve client efficiency and decision-making.
- Analyzed Albertsons and Kroger store locations to evaluate the economic impact of their merger, using Maptitude to uncover geographic and demographic trends; findings were featured in a blog post recognized by the Financial Times.
- Trained and supported over 100 corporate and government clients, consistently earning positive feedback for clear communication and empowering users to leverage geospatial tools for strategic insights.

Boston College Economics Department June 2020 - May 2021
Research Assistant to Professor Paul Cichello

- Applied statistical methods to analyze time series COVID-19 data using Stata, highlighting the long-term effects of small growth rate variations on pandemic outcomes and enhancing public understanding of exponential growth dynamics.
- Produced data visualizations and authored five blog posts, effectively translating complex statistical concepts into accessible insights that informed policymakers and public health decisions during the COVID-19 pandemic.

RELEVANT PROJECTS

Harvard University Data Science I and Visualization Project September 2024 - December 2024
Voter Turnout and Demographics in Massachusetts

- Designed a machine learning pipeline in Python, incorporating feature selection with LASSO regression and permutation importance, hyperparameter tuning of a random forest model, and interpretability analysis using SHAP values.
- Analyzed Massachusetts voter data to evaluate the impact of demographic features on voter turnout, offering actionable insights for targeted policy interventions to increase voter engagement.
- Developed and deployed an interactive data visualization platform with D3.js, enabling stakeholders to explore the voter data and modelling process for informed decision-making.

Boston College Economics Senior Thesis August 2020 - May 2021
Long Term Effects of Parental Migration on Indonesian Income

- Implemented an instrumental variable regression model in Stata, leveraging five waves of a longitudinal dataset to estimate the causal effects of parental migration on income, revealing an increase in non-labor migration.
- Conducted feature engineering by integrating detailed parental migration histories with children's socioeconomic data and living conditions, enabling comprehensive analysis of long-term impacts.

COMMUNITY INVOLVEMENT

Harvard Graduate Advisory Committee September 2024 - Present
Committee Member

- Organized monthly events to foster interdisciplinary collaboration among graduate students in Harvard's Data Science and Computational Science & Engineering programs, strengthening academic networks and peer support.