Lena Bradley, PhD

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SKILLS

Languages
Python*, PySpark*, SQL*, Scala, Matlab

Machine Learning & Statistics
Verification & Validation*, Mixed-effects models*, Parametric & nonparametric stats, Computer vision, Classification, Regression, NLP, Tree-based models, Knowledge graphs

Data Engineering & Wrangling
Data visualization*, ETL, EDA, Dashboards*, DAG design

Python Libraries & Frameworks
Numpy*, Pandas*, Scikit-Learn, Matplotlib/Seaborn*, Plotly*, Dash*, PyTorch, Keras, NLTK, FastText, XGBoost, Tableau, PyTest*

Software deployment & MLOps
Databricks*, Git*, Docker*, MLFlow, Kubernetes, Swagger/OpenAPI, Flask, AWS, Azure, VSCode, PyCharm, Unit testing, CI/CD

Agile development
Confluence*, Jira*, Scrum, Kanban, Sprint planning*, Quarterly planning, OKRs

Most proficient

EDUCATION

Cornell University
2011 – 2018
Ph.D. in Applied Physics
Minor in Biomedical Engineering

Published 4 first-author papers; presented at 7 conferences; 1 patent

Fellowships: NIH Individual F31 Predoctoral Fellowship Grant; NSF Graduate Research Fellowship; Cornell Presidential Life Science Fellowship

Penn State University
2007 – 2011
B.S. with Honors in Physics
Minors in Biomedical Engineering & Mathematics

Fellowships: Goldwater Scholarship; Penn State Braddock Scholarship (full ride)

EXPERIENCE

ZOOX | Boston, MA

Senior Data Scientist   11/2022 – Present
• Lead a team responsible for Perception release validation
• Develop strategy to ensure models are safe & effective
• Create and maintain dashboards for performance testing & monitoring (SQL, Spark, Plotly-Dash)
• SME for large-data processing and analysis (Databricks, Spark)

Altana Technologies | New York, NY (remote)

Data Science Manager   08/2021 – 10/2022
Senior Machine Learning Engineer   05/2021 – 08/2021
• Built and managed team of data scientists, software engineers, & SMEs
• Led development and training of NLP deep learning multiclass classifiers (>1000 classes) on GPU and CPU clusters (PyTorch; scikit-learn; Databricks; AWS; Azure)
• Processed and trained large data (10M-1B rows) using PySpark & SQL
• Combined ML models and SME rules for to tune models to user needs
• Developed process for promoting models to production, incl QA (MLFlow)
• Deployed real-time models (Kubernetes, Gunicorn, OpenAPI, Flask)
• Created team onboarding, documentation, & planning (Confluence; Jira)
• Ran interviews and facilitated hiring for the team

MORSE Corp | Boston, MA

Chief Engineer   03/2020 – 05/2021
Data Scientist, Tech Lead   08/2018 – 03/2020
• Built algorithms for physical modeling, optimization, and unsupervised anomaly detection of geospatial data
• Led two teams with 12 data scientists and SWE deploying AI models
• Developed and delivered sales pitch resulting in over $10M AI contract
• Deployed algorithms to AWS GovCloud with protobuf interface
• Designed company-wide best practices for Python development
• Led team of 3 engineers to create full-stack web app (Python, JS React)
• Developed a suite of Python packages used across programs, including company's first open source (OSS) project: Snappiershot
• Featured in BuiltIn Boston

Insight | Boston, MA

Data Science Fellow   01/2018 – 05/2018
• Modeled clinical trial dropout with linear regression & random forest
• Deployed web application via Dash

Cornell University | Ithaca, NY

Radio music playlist analysis (Personal project)   12/2016
• Scraped music metadata from web and open source database APIs
• Created public-facing interactive Tableau visualization (News coverage)

Research Fellow   8/2011 – 5/2018
• Designed & built custom mechanical testing stage (3D printing; CAD)
• Analyzed multi-dimensional images (5D, 100GB) using Computer Vision techniques in MATLAB & Python to segment, track, & classify cells
• Tested hypotheses using mixed-effects regression