

Nikhil Anil Prakash

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Master's student in Electrical and Computer Engineering at Northeastern University, specializing in Computer Vision, Machine Learning, and Software Engineering. Seeking Full-Time opportunities to leverage expertise in computer vision, machine learning, and software engineering while contributing to challenging real-world problems

EDUCATION

Northeastern University, Boston, MA

Dec 2025

Master of Science in Electrical and Computer Engineering - GPA: 3.9

Coursework: Fundamentals of Computer Engineering, Machine Learning and Pattern Recognition, Advanced Machine Learning, Machine Learning Operations

PES University, Bengaluru, India

May 2023

Bachelor of Technology in Electronics and Communications Engineering - GPA: 3.31

Minor in Computer Science

Coursework: Machine Learning, Artificial Neural Networks, Computer Organization and Digital Design, Embedded Systems, Data Structures, Algorithms

PROFESSIONAL EXPERIENCE

IT Intern, Tractor Supply Co.

May 2025 - Aug 2025

- Implemented an end-to-end SEO and performance monitoring system leveraging Python-based ETL pipelines, data preprocessing, and anomaly detection across web crawling operations
- Orchestrated the integration of rule-based and machine learning models to compute health score and detect site-level SEO/performance regressions across 100+ web pages
- Deployed an automated business intelligence reporting framework that generates actionable insights via markdown reports and dashboards, driving visibility into web vitals and metadata compliance

Intern, Bosch Global Software Technologies Pvt Ltd.

Feb 2023 - May 2023

- Developed inverter software functions for electric vehicles using ASCET and contributed to enhancing system functionality
- Engineered a software module in ASCET to safely switch the vehicle to a safe state upon reaching a specified voltage threshold, testing the code using a remote vehicle simulator
- Facilitated in the comprehensive documentation of ongoing projects, ensuring accuracy and completeness, while collaborating with the team to improve workflow efficiency

Summer Intern, Bosch Global Software Technologies Pvt Ltd.

Jun 2022 - Jul 2022

- Devised a speed monitoring model using ASCET, leading to a 15% improvement in calibration precision for electric vehicle systems
- Developed a Python-based data analysis interface with statistical analysis capabilities, streamlining the monitoring and calibration process by 30% through improved data processing workflows
- Collaborated with a cross-functional team to standardize components, achieving high compliance with company norms and reducing file generation warnings by 25%

PROJECTS

Optimizing Bluebikes Operations with Machine Learning Based Demand Prediction ([View](#))

Northeastern University

Oct 2025 - Dec 2025

- Engineered end-to-end MLOps pipeline using Python, Docker, and Apache Airflow to predict hourly bike-sharing demand across 40+ features, achieving R^2 scores of 0.85+ with XGBoost, LightGBM, and Random Forest models tracked via MLflow
- Automated CI/CD workflow integrating GitHub Actions, bias detection across 3 dimensions (temporal, weather, demand), and Evidently AI drift monitoring, reducing pipeline runtime by 85% (30+ minutes to 2-5 minutes) through incremental data collection
- Deployed production-ready ML system with automated model validation, GitHub Releases artifact management, and Discord alerting, processing 3 data sources (BlueBikes trips, NOAA weather, Boston colleges) with configurable retraining triggers

Benchmarking ML Models for Boston's Weekly Weather ([View](#))

Northeastern University

Mar 2025 - Apr 2025

- Engineered and evaluated 4+ machine learning models (Bayesian Regression, Gaussian Process, Bayesian Neural Networks, Decision Tree) for weekly precipitation forecasting using statistical analysis of 7,000+ daily weather records from NOAA data (2005–2024), achieving a 37.9% reduction in RMSE with Decision Trees
- Implemented uncertainty quantification using Laplace Bayesian MLP, achieving 92.75% to 95% CI coverage, the highest among all models, while optimizing Monte Carlo Dropout and variational inference
- Led feature engineering and time series analysis with lagged variables, seasonal indicators, and rolling stats, contributing to a 58% improvement in MAE and 0.41 R^2 score using Decision Trees—outperforming all Bayesian counterparts in accuracy

SKILLS

Programming Languages: Python, C, C++, R, SQL, System Verilog, JavaScript

Data & Analytics Tools: Tableau, MATLAB, A/B Testing, Statistical Analysis, ETL Pipelines, Business Intelligence, SharePoint, Google Cloud Platform (GCP)

Development Tools: Linux, Git, ROS, Jupyter, SciPy, React, Docker, Airflow, DVC

Python Libraries: NumPy, Pandas, TensorFlow, OpenCV, Scikit-learn, Matplotlib, GTSAM, Open3D, Requests, BeautifulSoup, Mlflow, Evidently
Certifications: [Google Data Analytics](#), [IBM Data Science](#), [Machine Learning Specialization by DeepLearning.AI](#)