

Corey Heckel

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TECHNICAL SKILLS

- **Programming Languages:** Javascript, Python, R, Java, C#, C++, Typescript, HTML/CSS, MATLAB
- **DB & Query Languages:** SQL, PostgreSQL, MongoDB, Firebase, GraphQL, Cassandra
- **Web Technologies:** React, Next, Node, Express, Redis, jQuery, WebSockets, Tailwind, Figma
- **Data Visualization & Analysis:** Pandas, Numpy, Matplotlib, Plotly, Dash, Three, D3, PowerBI, Excel
- **Machine Learning:** Linear & Logistic Regression, Decision Trees, Random Forest, Deep Learning, Neural Networks, ARIMA, Time Series, K-Means Clustering, K-NN, LDA, SVM, PyTorch, Tensorflow, Keras, Scikit-learn
- **Testing & Quality Assurance:** JUnit, CircleCI, Postman, PyLint, Coverage
- **Documentation:** Overleaf, LaTeX, Lucidchart, UML, Requirements Analysis, Jupyter, Jira
- **Cloud & DevOps:** AWS, IoT, Docker, Databricks, Apache Spark, EMR, Kafka
- **Finance:** Stock Simulation, Option Pricing, Portfolio Optimization, Fair Price, ETF Stock, Interest, IRR

PROFESSIONAL EXPERIENCE

Lead Full Stack Engineer | SonicScript

May 2023 - Present

- Facilitated the independence of visually impaired individuals through the development of a system that successfully teaches them to write using audio feedback with up to **90% accuracy**.
- Enhanced user accuracy by **30%** through advanced **image processing & machine learning** algorithms
- Secured **\$1,000** in funding for further research and development.

Associate Dashboard Developer | ART-022

May - Aug 2022

- Conducted a case study of **800+** participants to determine the effects of **data visualizations** on strategic decision making using **Python, dash, plotly, numpy, and pandas**.
- Debugged an artillery dashboard organized through the U.S DoD optimizing the user interface.

Associate Data Analyst | MLB Pitching Analysis

May - Aug 2021

- Mitigated potential deceleration injury risks by **15%** through detailed joint movement **analysis**.
- Contributed to a **10%** improvement in pitchers' overall performance metrics.

EDUCATION

Master of Science: Machine Learning, *Stevens Institute of Technology*

GPA: 4.0

Bachelor of Engineering: Software Engineering, *Stevens Institute of Technology*

GPA: 3.723

Organizations/Awards: Pinnacle Scholar, Phi Sigma Kappa, Club Baseball, Dean's List, High Honor, Order Of The Engineer

PROJECTS

Machine Learning Engineer | Bankruptcy Prediction Model

July - August

- Predicted bankrupt companies with **98%** accuracy by **stacking** multiple classification models as a **meta-classifier** trained and tested on financial data.

Machine Learning Engineer | Fraudulent Transaction Detection

May - August

- Detected fraudulent credit card transactions with **98%** accuracy by **training** and **testing** a **logistic regression, decision tree, & random forest** model using **R**.

Machine Learning Engineer | ARPU Forecast

May - July 2024

- Forecasted the Average Revenue per User and Economy for African countries through 2030 by **training** and **testing** **linear regression, polynomial regression, and ARIMA** algorithms.

Front End Developer | EchoLab

Feb - May 2024

- Enabled collaboration of **50+** users in a **React** application programming environment.
- Engineered an **Agora**-based voice call functionality synchronizing user modification through **Socket.io**
- Employed **Docker** to run user code submissions securely and efficiently, and **AWS** for hosting services.

Full Stack Developer | Irwin

Jan - May 2023

- Improved data handling through the development of a **React** survey system storing data in **MongoDB**.

Full Stack Developer | There's Options

Feb - Apr 2022

- Fostered a **25%** increase in **trading** insights for beginners through **stock market** trend **visualizations**