

# Zachary Mackin

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## Zachary Mackin

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## Education

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### University of California, Berkeley

May 2024

#### Bachelor of Arts in Data Science, Computer Science, and Statistics

**Relevant Coursework:** Foundations of Data Science, Data Structures, Structure and Interpretation of Computer Programs, Probability and Mathematical Statistics in Data Science, Economic Models in Data Science, Calculus, Multivariable Calculus, Linear Algebra and Differential Equations, Introduction to Machine Learning, Optimization Models in Engineering

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## Experience

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### UC Berkeley EECS Department / Machine Learning Researcher

August 2022 - December 2022

- On a research team creating a more effective UAV for the DARPA SymCPS competition
- Employing Python and AWS to develop more effective ML models to develop the UAVs

### Chesapeake Legal Alliance / Software Developer

January 2022 - June 2022

- Responsible for exploring and processing data on the land use loading rate within the Chesapeake Bay
- Developed a mapping application and additional explanatory materials using ArcGIS and Python to display this data

### The Economist Intelligence Unit / Data and Research Analyst

August 2021 - January 2022

- Collaborating with team members to strengthen a model predicting a country's risk of defaulting and presented findings in a clear and concise manner
- Cleaned and analyzed data in order to utilize various Machine Learning techniques for classification and dimensionality reduction resulting in a 4% improvement in the model

### University of California, Berkeley / Instructor and Tutor

May 2021 - PRESENT

- Educator for introductory mathematics, statistics, and data science courses
  - Presently uGSI for Data 8
  - Learned how to communicate various difficult topics in an effective way to a variety of learners. Able to simplify and explain complicated subjects to an understandable level
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## Skills & Projects

**Programming Languages:** Python, R, Java, SQL, Regex

**Libraries and Frameworks:** Numpy, Pandas, GGplot, SKLearn, Seaborn, Matplotlib, PyTorch

**Skills: Regression:** Linear, Multiple Linear, Logistic, Random Forest, Polynomial, SVR **Classification:** Random Forest, Naive Bayes, K-NN, SVM **Statistical Methods:** Hypothesis Testing, A/B testing, ANOVA, Bias/Variance **Other Skills:** Visualization, Data Cleaning, Feature Selection, Hyperparameter Tuning, Principal Component Analysis, Reinforcement Learning, Deep Learning

**Git:** Used Java to build a version control system that tracks and commits file changes, reverts and adds to and from previous versions, efficiently searches and tracks data, and creates branches

