

# Crystal Goulet

UC Berkeley Graduate | Python, SQL, AI & Analytics | Passionate About Real-World Impact

## PROJECTS & EXPERIENCE

### **Machine Learning** *Artificial Intelligence Class Project* SUMMER 2024

Developed and fine-tuned neural networks (PyTorch) for digit classification (MNIST) and language identification

Achieved 92.55% test accuracy through batching, feature engineering, and activation function tuning

### **Production Control SQL Database**, *Data Engineering Class Project* FALL 2024

Planned, designed, and implemented SQL schema.

Improved data structure, consistency, and reporting capabilities

### **Mental Health in the Tech Industry**, *SAAS Club Decal Project* SPRING 2023

Led EDA on 1M+ data points, uncovering trends in health inspection scores

Delivered insights to improve compliance and decision-making across facilities

### **Data Analytics Associate**, *ASUC Senate (Volunteer)* SPRING 2022- FALL 2023

Conducted sentiment analysis on campus surveys using NLP techniques

Identified barriers to student participation; findings directly shaped new policy and boosted engagement

## SKILLS

**Data Engineering & Tools:** SQL (Query Optimization, Relational Algebra), Snowflake, MongoDB, ETL Pipelines, Data Cleaning & Preprocessing, Tableau, Matplotlib

**Machine Learning & AI:** Neural Networks (Perceptron, CNNs), Reinforcement Learning, Clustering, Decision Trees, Regression Models, Time Series Forecasting, A/B & Multivariate Testing

**Analytics & Modeling:** EDA, Feature Engineering, Statistical Modeling, Hypothesis Testing, Causal Inference, Financial Data Analysis, Risk & Scenario Modeling

**Platforms & Environments:** Python, Linux, Bash, Excel, Windows, MacOS, Kaggle

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## LEADERSHIP & INVOLVEMENT

### **PTK Honor Society – Historian**

- Oversaw club marketing strategy, managing social media, media design, and promotional content
- Coordinated campus-wide events and maintained documentation to support member engagement

### **SWEE – Project Manager**

- Oversaw student-faculty engagement and project lifecycle from planning to execution
- Facilitated collaborations for beach cleanups, safe water system development in Africa, and solar-powered smoothie events

## COURSEWORK

- Artificial Intelligence
- Business Analytics
- Healthcare Analytics
- Data Engineering
- Data, Inference, and Decisions
- Data Structures & Programming Methodology
- Principles & Techniques of Data Science
- Computational Structures in Data Science
- Structure and Interpretation of Computer Programs
- Concepts of Probability
- Linear Algebra and Differential Equations