

# CHRISTOPHER DENQ

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## SUMMARY

**Full-stack data scientist with 5 years of experience** in data (2 industry, 3 academia research). Expertise in data analytics, machine learning, and data engineering. Background in art market instills a focus on **user-centered design** and **diverse industry perspective**.

## EDUCATION

**University of Pennsylvania** | Philadelphia, PA

Post-Baccalaureate, Data Analytics

Mar 2022

Bachelor of Arts, Philosophy and Art History

May 2021

- **Courses:** Data Engineering (SQL), Full-stack Software Engineering, Data Structures/Algorithms, DevOps

**University of Illinois – Springfield** | Springfield, IL

Bachelor of Science, Mathematics

May 2023

- **Courses:** Machine Learning, Statistics, Probability, Linear Algebra, Discrete Mathematics, Multivariate Calculus

## DATA EXPERIENCE

### Data Science Intern

Jun 2023 – Aug 2023

United States Department of Defense | Washington, DC

- Staffed to Naval Surface Warfare Center: Crane Division (NSWC Crane)
- Will create a machine learning product (NLP) that ingests and prioritizes AI research for military budgets and policy strategy

### Data Science Apprentice

Mar 2023 – Jun 2023

Adobe Inc. | New York, NY

- Selected scholarship finalist for Adobe's Digital Academy apprenticeship; engaged in 480+ hours of instructor-led content
- Successfully completed 3 machine learning hackathons, 4 data projects, and 1 capstone project

### Data Analyst Contractor

Sep 2021 – Mar 2023

- Total 2 years: PNC (intern), Tzu Chi Medical Foundation (contract), 2U Education (part-time), Wyzant (freelance)
- PNC: Saved \$375k via data-driven recommendations on loan pipeline; created 8 dashboards for 7 departments
- Tzu Chi: Decreased patient treatment time by 25% via dashboards and data automation that streamlined office productivity
- 2U Education: Taught 210+ hours of 2U's data analytics curriculum to 35 students; created classroom analytics to monitor
- Wyzant: Tutored 65+ hours of computer science and data to 25 students; average raise of 2.7 letter grades

### Machine Learning Fellow and Researcher

Jun 2012 – Sep 2013, Nov 2021 - Jan 2023

Cambridge University, et al. | Cambridge, England, et al.

- Total 3 years: most notably Cambridge (post-bacc), CSUN (post-bacc), UF (intern)
- Cambridge: Researched transformer interpretability: experience with raytracer, ResNet, backprop, BERT, and LLMs
- CSUN: Researched machine learning curriculum to add to a Spring 2023 graduate-level machine learning class
- UF: Researched SVM param space to detect Alzheimer's biomarkers; published [paper](#)

### Art Analyst

Sep 2017 – Aug 2020

- Worked 3 years in art markets: most notably at Christies (intern) and Philadelphia Museum of Art (full-time)
- Christie's: Contributed to 3 sales (collection net \$19.5M) and establishing "Net Art/generative art" category
- PMA: Analyzed 22+ artworks and artifacts for museum Acquisition team to add to permanent gallery

## SELECTED PROJECTS ([FULL PORTFOLIO](#))

### Deepfake Image Classifier App | [Source](#)

May 2023

Python: Matplotlib, Numpy, Pandas | Tensorflow: Keras | Streamlit

- Developed an EfficientNetv2 convolutional neural net to detect deepfakes (0.99 validation precision)

### Poisonous Mushroom Identifier Full-Stack App | [Source](#)

Mar 2022

Python: Matplotlib, Numpy, Pandas, Seaborn, Flask, SQLAlchemy | Tensorflow: Keras | SQL | HTML/CSS/JS

- Developed a full-stack web-app that applies RF, SVM, LogReg to detect poisonous mushrooms (0.99 validation accuracy)

## SKILLS & FLUENCIES

- |                                   |   |
|-----------------------------------|---|
| • <b>Languages:</b>               | Python: OOP & Functional   HTML/CSS/JS   APIs   Git                                     |
| • <b>Machine Learning:</b>        | Python: Scikit-Learn, Keras, Numpy, Scipy   Statsmodel   Tensorflow (G. Collab)         |
| • <b>Analytics/Visualization:</b> | Python: Pandas, Matplotlib, Seaborn   Tableau   Excel/VBA                               |
| • <b>Database, Cloud, DevOps:</b> | SQL   NoSQL   Apache Hadoop/Spark   AWS   Python: Flask, SQLAlchemy   Streamlit         |
| • <b>Domains</b>                  | Classification / Segmentation   Regression / Forecasting   NLP   Computer Vision   LLMs |

## HOBBIES

Competitive Escape Rooms ("Ranked Runs") • Resource-Management Boardgames • Tabletop Roleplaying Games