

CHRISTOPHER DENQ

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EDUCATION

University of Pennsylvania, College of Liberal and Professional Studies

Philadelphia, PA

Bootcamp Certificate in Data Science

March 2022

- Cumulative GPA: 4.0/4.0
- **Topics:** Machine Learning, Big Data Analytics, Fullstack Development, Database Management

University of Pennsylvania, College of Arts and Sciences

Philadelphia, PA

Bachelor of Arts in Philosophy and History of Art

May 2021

- **Honors:** John C. Parker Fellowship (\$500 for statistical optimization on game theory model)

2016

SKILLS AND FRAMEWORKS

- **Big Data & Cloud:** Apache Hadoop, Spark, PySpark, Snowflake, AWS
- **Machine Learning:** SKLearn, Scipy, TensorFlow, Keras, PyTorch
- **Visualization & Analysis:** Tableau, Pandas, Numpy, Matplotlib, Seaborn, Excel/VBA, Google Sheets/Apps Script
- **Back-End Programming & Database:** Python, R, Java, PostgreSQL (SQL), MongoDB (NoSQL)
- **Front-End Server & Web Application:** HTML/CSS/JavaScript, Flask, Docker, GCP Cloud Run, Github Pages
- **Other:** Agile/Scrum, ETL, Git/Github, Google Colab, Amazon SageMaker, APIs, web scraping, Adobe Photoshop/Illustrator

SELECTED PROJECTS (More on GitHub)

Full-Stack Interactive Machine Learning App: Undiscovered Mushroom Edibility Predictor/Identifier

March 2022

Python (Flask, SKLearn), HTML/CSS/JavaScript

github.com/cdenq/mushroom-edibility-predictor-web-app

- Un/supervised machine learning project that trains on 1k+ known mushroom data points to predict 60k+ simulated data points of potential undiscovered mushrooms to identify and predict its edibility (safe, poisonous, undeterminable)
- Evaluated 7 machine learning models (95-99% accuracy scores), created 15+ EDA visualizations
- Created 1 web app, 3 webpages, 1 report, 15+ slides; presented findings to 3 Penn faculty/staff and 20+ students

Deep Learning Model: Charity Funding Predictor

February 2022

Python (Pandas, SKLearn), Google Colab, TensorFlow, Machine Learning

github.com/cdenq/charity-funding-success-predictor

- Cloud-based computing, machine learning project that preprocesses, trains, and evaluates 41k data points on charity funding
- Creates deep learning neural network with 3-6 layers, 10 neurons; optimized hyperparameter tuning in 500+ epochs
- Found model with over 80% accuracy within 1 iteration, 91% accuracy within 3 iterations; created 1 analysis report

Full-Stack Interactive Web Dashboard: Market Metrics on Video Game Industry

January 2022

Python (Flask), MongoDB, HTML/CSS/JavaScript

github.com/cdenq/video-game-performance-scraper-and-web-dashboard

- Full-stack project that scraped market metrics on the video game industry and visualized on dashboard
- Analyzed 10k data points, maintained 5 MongoDB collections, created 19 visualizations
- Created 1 web app, 2 webpages, 1 report and 13 slides; presented findings to 3 Penn faculty/staff and 20+ students

RELEVANT EXPERIENCE

California State University: Northridge, College of Engineering and Computer Science

Northridge, CA

Machine Learning Research Assistant

November 2021 – Present

- Researching graduate-level machine learning material, creating 4+ class slide decks, 10+ Python examples to demonstrate ML concepts, assisting in general class material preparation, proofreading, documentation for Professor Wen-chin Hsu
- **Succeeding** in applying abstract ML and statistical material to Python code and slide decks for graduate-level course

Freelance/Volunteer Computer Science Tutor: Penn LPS, CSUN, Code.org, Wyzant.com, Local

Various

Data Science Tutor, COMP542 Tutor, Python Course Teacher, AP Computer Science Tutor

September 2021 – Present

- Taught computer science topics to 25+ high school, college, and adult learners for total 65+ hours ranging from coding fundamentals to advanced data structures and algorithms to machine learning topics
- **Succeeded** in adapting teaching style, clearly communicating abstract computer science concepts, mentoring students

Oasis Commissary (Non-Profit), University of Pennsylvania

Philadelphia, PA

Founder and Executive Business Operations Manager

September 2016 – March 2020

- Wrote proposal to turn unused dormitory space into non-profit commissary, obtained vendor license from Philadelphia city
- Managed 21 staff and 2 junior managers, \$2000 bi-monthly budget, 6 marketing campaigns, 2 training programs
- **Succeeded** in serving local college dorm for 3 years: \$1300 gross (returned to Penn), 22k purchases, 180 unique clients