CHRISTOPHER DENQ

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SUMMARY

Data scientist with **1.5+ years** in applying data-driven approaches to solve ambiguous business challenges. Experienced in **full stack** process: data generation, ETL pipeline, cleaning and labeling, **data analytics**, web visualizations, dashboard creation, and **machine learning**. Unique holistic background in analytical philosophy and art specialty translates into a highly driven and adaptive mentality.

EDUCATION

University of Pennsylvania, School of Engineering and Applied Sciences — **Philadelphia, PA**
Certificate Program in Data Science — September 2021 – March 2022

University of Pennsylvania, College of Arts and Sciences — **Philadelphia, PA**
Bachelor's in Philosophy and History of Art — August 2015 – May 2021
Minor in Consumer Psychology (Marketing) from Wharton

- John C. Parker Fellowship for Undergraduate Research ($500 for statistical optimization on board game)

TECHNICAL LANGUAGES AND FRAMEWORKS

- **Python** (pandas, numpy, scipy ,matplotlib)
- **PostgreSQL**, **mongoDB**, SQLite, SQLAlchemy, Pymongo
- **Machine Learning** (supervised, unsupervised)
- **Excel, VBA**, Google Sheets, Google Apps Script
- **HTML**, **CSS**, **JavaScript**, Bootstrap, Plotly, Leaflet
- **Beautiful Soup**, **Selenium**, **Flask**, Splinter, Requests
- **Tableau**, **R Programming**, **Statistics**, Modeling
- Web APIs, Git, GitHub, Unix

SELECTED PROJECTS (MORE ON GITHUB.COM/CDENQ)

Qualitative Data Analysis: Tweet Scraper and Analyzer — January 2022 – February 2022
Twitter API, Python (Selenium, Pandas, Matplotlib), Tableau

- Back-end project that scrapes Twitter social/media content for the top 100 non-profit companies in the past 3 months, estimated 5,000 data points; analyzes and visualizes data on 7 different metrics
- Collaborates with Ph.D. candidate in Educational Leadership at the University of San Diego (Ph.D. dissertation)

Web Dashboard: Market Metrics on Video Game Industry — January 2022
Yahoo Finance API, Python (Pandas, Beautiful Soup, Splinter, Requests, Pymongo, Flask), MongoDB, HTML/CSS/JavaScript

- Full-stack project that scraped market metrics on the video game industry and visualized that data on live, interactive dashboard; Python webscraping, API interaction, and direct import to generate 10,000 data points; Python cleaning and MongoDB database to complete ETL process with 5 collections; front-end dashboard generates 19 visualizations
- Created 1 report and 13 slides, presented findings to 3 Penn faculty/staff and 20+ students

Extract, Transform, Load (ETL) Pipeline: Crypto and Index Fund Prices — December 2021
Python (Pandas), Web APIs, SQL

- ETL pipeline team project that takes Kaggle datasets and CoinMarketCap web APIs to generate 125k data points, clean and transform into monthly aggregations, and load into SQL database of 21 tables

Exploratory Data Analysis (EDA): Streaming Services Performance Trends — November 2021
Python (Pandas, Matplotlib), Google Slides

- EDA team project on 9 Kaggle datasets, totaling 30,000 data points to discover unlearned trends in offering packages of Netflix, Hulu, and Disney+ based on 7 different metrics
- Created 36 visualizations, 1 written port, and 15 slides; presented to 4 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

- Currently working directly with Dr. Wenchin Hsu, professor of computer science at CSUN
- Researching graduate-level machine learning material, creating 4+ class powerpoints, writing 10+ Python examples to demonstrate ML concepts, assisting in general class material preparation, proofreading, documentation

University of Pennsylvania, Kings Court English College House — **Philadelphia, PA**
Chair of Manager Board — August 2017 – May 2021

- Manages team of 11 other managers, leads weekly meetings, liaisons for 3 student staff groups
- Leads 14-16 annual house initiatives, 12 study break events for 450+ students, 5 residential programs
- **Succeeded** in 32% increased student attendance (34.0 from 25.6), 24% increased event quality ratings (4.1 from 3.3), 3 new event traditions, 2 new in-house management strategies

University of Pennsylvania, Kings Court English College House — **Philadelphia, PA**
Executive Business Operations Manager — September 2016 – March 2020

- Managed 9 student staff and 1 Associate Manager, including scheduling, training, and payroll
- Maintained in-house lounge: hosts 5 semesterly arts & crafts/relaxation/enviro-conscious programs
- Maintained in-house retail: manages $5000 bi-monthly budget, advertisement, and P&L responsibility
- **Succeeded** in grant proposal, piloting, and maintaining store presence over 3 years, 710+ transactions per semester, 60+ unique clients serviced per semester

McKinsey & Company — **New York City, NY**
Business Analyst Intern — June 2018 – Aug 2018

- Trained, operated in 4-person team; staffed to real client engagement as an intern
- Analyzed 12+ databases, assisted in building 4+ iterations of financial models, created 3 drafts and final risk assessment reports, completed 2 presentations to team and client
- **Succeeded** in learning about client's situation and conducting relevant research, providing deliverables to client with team, sanitizing and adding new insights to internal PD documentation

Volunteer Experience

OpenGenus, Open-Source Computer — **Remote**
Machine Learning Developer Intern (Data Science Concentration) — Starting February 2022

- Will contribute 10+ OpenGenus IQ articles on data science and machine learning
- Will create 1 capstone development task (visualization demonstration)

Computer Science Education (Various), Penn Tutoring (Weingarten), Code.org, Wyzant.com, Local — **Remote**
CIS121 Remote Tutor, Python Course Teacher, AP Computer Science Tutor — September 2021 – Present

- Collectively taught computer science topics to 20+ high school, college, and adult learners for total 35+ hours ranging from coding fundamentals to advanced data structures and algorithms
- Effectively adaptive teaching style to match different students at different understandings, clearly decompose abstract concepts to tangible, digestible bits

Interests

Sudoku • Chess • Escape Rooms • Economy-Based Board Games • Murder Mystery Dinner Parties