

# Joseph Gambino

Data Scientist  
Product Designer

## Contact

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## Education

**Northwestern University**  
Mechanical Engineering  
Certificate of Design  
Co-op Certificate  
Class of 2014

### Metis

Data Science Bootcamp  
Fall 2017

## Skills

### Languages

Python, C  
SQL, SQLAlchemy  
Flask, FastAPI, PyTorch  
Postgres, MongoDB  
Javascript, Typescript  
React, NextJS

### Tools & Libraries

GCP, AWS, Heroku  
Git, GitHub, CI/CD  
Scikit-learn, Pandas  
Streamlit, Docker  
NetworkX, OSMNX

### Focus Areas

Simulation & Modeling  
Algorithm Prototyping  
Geospatial Analysis  
API Dev & Documentation  
Unit Tests  
Network Theory

### Handiwork

SolidWorks, Fusion360  
CAM, CNC, Knee Milling  
Injection Molding  
Laser Cutting, 3D Printing

## IDEO

### Data Science Lead

2018 – 2024

*Content Personalization* Led the design and implementation of a bespoke recommendation engine for a mental health app that married machine learning with deliberate curriculum-driven guidance.

*Revenue Prediction* Using IDEO's historical sales and pipeline data, built a revenue prediction model to inform leadership decisions, prioritize resources, and inform future record-keeping strategies.

*IdeaDB* Wrote a custom ETL package (in SQLAlchemy) to extract data from internal ERP systems, consolidate into recognizable entities, and stand up a SQL database containing only what the user requests. Led the development of several new internal tools using the system.

*Fast Food Drive-Thru Simulator* Developed the algorithm and interface of a custom traffic simulation to model vehicles in a drive-thru. Incorporated kitchen data to study how different order-taking concepts affected throughput, employee utilization, and slack in the system. Proved that concepts relieved demand on employees' time without slowing down service.

*Vehicle Electrification* Designed alongside and built a web app (which is still in use) for non-technical salespeople to independently analyze customer data and deliver recommendations. Wrote the technical and design roadmap for how this prototype can be a vehicle for broader digital transformation within the company.

*Recommendation Engine* Game-ified a recommendation algorithm to demonstrate to the client how recommendation engines learn over time and how – rather than replacing their staff – the tools will work best with them in control. Wrote the predictive models and Flask backend.

*Workout Data* On a hyper-short timeline, analyzed customer data to discover patterns of use, proved why current metrics were misleadingly simple, and delivered an archetypal framework for prioritizing user interviews. Convinced client to leverage their own data scientists' curiosity.

*BabelFish* Built a custom Slack app to translate messages in channels where Japanese-only and English-only speaking colleagues were collaborating.

*Innovation Workshop* Developed and co-led a two-day workshop for corporate employees of a fast food giant to re-live on-the-ground research and interactively prototype new kitchen layouts. Expensed chicken nuggets.

*Package Delivery Driver* Led the data science efforts of a fake start-up set up as an ongoing research experiment. Translated hypotheses into an experiment design, then a "business model" and operations plan. Wrote a custom staff and inventory management tool in React. Project managed external developers. Led and synthesized design research interviews to modify the experiments throughout. Set up a field office. Hand-delivered packages. Crafted the final story convincing the client to invest in the industry, concept, and research capabilities.

## Verena Solutions

### Lead Mechanical Engineer & Product Designer

2015 – 2017

*Product Development* Took the founder's concept from brainstorm to manufactured product. Cultivated relationships with key customers to include them in repeated rounds of user testing. Prototyped, iterated, and designed for injection molding the novel needle and safety cap device. Courted and pitched investors and grew manufacturing partnerships.

*Consulting* Built out the consulting arm of the company through active networking and advising prospective clients. Quoted and scoped projects, vetted and managed subcontractors. Delivered numerous early-stage prototypes, helping start-ups research users and raise funds.

## Northrop Grumman

### Engineer Level I

2014 – 2015

Managed classified classification algorithm testing for Modeling & Simulation, Infrared Countermeasures department. Designed optical components for laser test rigs. Stole saltines from the cafeteria.