

# NANCY TRINH

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## EXPERIENCE

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### Software Engineer, Venice (open-source project)

*Jan. 2020 - Present*

- Created back-end pipeline for stream processing, consisting of: Apache Kafka brokers, Zookeeper, Confluent Schema Registry, Kafka Connect, ksqldb, PostgreSQL server, and Kafdrop.
- Implemented event producers using Confluent's Python API.
- Built Docker images to distribute custom producers and consumers.
- Used bash scripts to automate tasks upon startup in containers, and to address race conditions between components in the pipeline.
- Interpolated environment variables to make code easier to maintain.
- Co-authored in-depth case study: <https://venice-framework.github.io/case-study.html>

### Data Scientist, Freewheel (acquired by Comcast)

*July 2016 - April 2018*

- Conducted week-ahead impression forecasts and used statistical analysis to inform pricing decisions.
- Automated business processes and reporting using Python.

### Advanced Analytics Consultant, ColdLight (acquired by PTC)

*June 2015 - Jul 2016*

- Worked on a variety of prediction problems, including video-on-demand rentals and purchases, diagnoses of chronic kidney disease, and hospital readmission risk.

## EDUCATION

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### Georgia Institute of Technology - College of Computing

*Aug. 2016 - Dec. 2019*

*M.S. in Computer Science with Concentration in Machine Learning, GPA: 3.88*

### University of Pennsylvania - The Wharton School

*Aug. 2011 - May 2015*

*B.S. in Economics with Concentration in Statistics, GPA: 3.35*

Awarded full-tuition scholarship (Questbridge National College Match)

**Graduate Coursework:** Algorithms; Machine Learning; Artificial Intelligence; Reinforcement Learning; Computer Vision; Operating Systems; Human-Computer Interaction; Machine Learning for Trading

**Undergraduate Coursework:** Probability; Regression; Data Analysis with Python; A/B Testing; Data Mining for Business Intelligence; Criminal Justice Data Analytics; Operations and Information Management

## PROJECTS

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### Image recognition of road signs and traffic lights

A machine learning model that detects road signs and traffic lights from the German Traffic Sign Detection Benchmark. Achieved performance comparable with state-of-the-art classification techniques.

Technologies Used: Python, OpenCV, gradient-boosted trees

### Simulated spaceship landings using reinforcement learning

A reinforcement agent that learns to safely land a simulated spaceship (OpenAI LunarLander-v2) using an approach adapted from Mnih et. al. *Human-level control through deep reinforcement learning, Nature 518, 2015.*

Technologies Used: Python, OpenAI, neural networks

## SKILLS

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**Languages and Technologies:** Python, Ruby, JavaScript, React, SQL, Docker, Linux, Bash

**Machine Learning Techniques:** Random Forests, Gradient-Boosted Trees, Neural Networks

**Python Libraries:** Numpy, Pandas, SQLAlchemy, Matplotlib, Scikit-Learn, Keras (Tensorflow), OpenCV