

# Van Minh Nguyen

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🔗 Portfolio | 🔗 LinkedIn Profile

## Education

### Florida Tech

PH.D OPERATIONS RESEARCH

- Researched on Double Stochastic Processes (Branching Process with random offsprings).
- Researching Electronics Health Record embeddings for Machine Learning/Deep Learning.

Melbourne, FL

Aug 2020 - Present

### Florida Tech

M.S. OPERATIONS RESEARCH, GPA: 4.0

Melbourne, FL

Aug 2018 - May 2020

### Florida Tech

B.S. BIOCHEMISTRY (BIOLOGY EMPHASIS), GPA: 3.43

Melbourne, FL

Aug 2014 - May 2018

## Work Experience

### Truveta

GRADUATE INTERN

- Developed a toolkit to measure data quality of Truveta Health Data Model (THDM), garnering trusts from health providers. Contributed to new partnerships with multiple after Private Review in Aug 2021, and with Microsoft in Sept 2021.
- Established the foundation approach and model for Synthetic Patient Health Data, helps identify bottleneck in ETL process of EHR.
- Developed an annotation recommender system for medical concept normalization. Reduced internal annotators' workload by 80%.
- Deployed cost-effective and scalable SOTA Named Entity Recognition (NER) Models for clinical notes information extraction. Saved \$2 million in cost compared to existing third party solutions, and optimized to reduce 75% operating cost overhead compared with original baseline

Seattle, WA

May 2021 - May 2022

### Florida Tech - Dept. of Mathematical Sciences

RESEARCH LAB - DEVOPS ENGINEER

- Deploy and maintain servers for deep learning lab lead by Dr. Ryan T. White
- Hosting on-prem Kubernetes cluster with MetalLB loadbalancer
- Deploy a multi-user Jupyter notebook with GPU support for deep learning researches

Melbourne, FL

January 2022 - Now

TEACHING ASSISTANT

- Taught and graded exams for Probability & Statistics, Neural Networks, Calculus I, II, III.
- Aided students studying Stochastic Modeling, Differential Equations.

August 2018 - December 2021

### IBM Skill Academy

IBM DATA SCIENCE PRACTITIONER - INSTRUCTOR

- Earned Certification for Instructor role for IBM Data Science Practitioner.
- Audited IBM Data Science learning material and proposed changes that was added to the material.
- Created a curriculum for teaching IBM Data Science course at Florida Tech.

May 2021 - June 2021

## Skills

**Software & Tools:** Python, Spark/PySpark, MySQL, Redis, PyTorch, ONNX, Kubernetes, Docker

**Operating Systems:** Windows, Ubuntu Server, Arch Linux, macOS

**Cloud Infrastructure:** Microsoft Azure, Google Cloud Platform, Cloudflare Worker, Heroku

**Other Skills:** Data Processing & Analysis, Stochastic Modeling, Reverse Engineering, Penetration Testing

## Projects

### Deep Transformer Soft Actor-Critic Network for Reinforcement Learning

UTILIZE TRANSFORMER AS MEMORY MODULE FOR BOTH ACTOR AND POLICY NETWORK FOR DOWNSTREAM RL TASKS

PyTorch, OpenAI Gym

[Project link]

### Sentiment Analysis on MyAnimeList User Ratings

DATAMINE, ETL TO EXTRACT USER REVIEW FROM MAL. PREDICT USER RATING BASED ON DATA-MINED REVIEW TEXT WITH SENTIMENT ANALYSIS. 94% TESTING ACCURACY WITH ENSEMBLE MODEL

Redis, Docker, Tensorflow

[Project link]

### Topological Features of Handwritten Digits and Letters Data for Deep Learning

APPLY PERSISTENT HOMOLOGY (TDA) AND PCA FOR FEATURE ENGINEERING. 91% ACCURACY WITH SHALLOW NETWORK

giotto-ai, sklearn, Tensorflow

[Project link]