Vee Upatising

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Computer Engineering graduate with hands-on experience in software engineering and database administration. Diligent self-starter with an interest in Python development concentrated on Data Science and Deep Learning.

EDUCATION

University of Massachusetts Amherst — May 2020
Bachelor of Science in Computer Engineering, GPA 3.18

COURSEWORK

Machine Learning, Artificial Intelligence, Computer Vision, Data Science, Probability, Algorithms, Data Structures, Statistics, Software Engineering, Linear Algebra, Signals and Systems, Circuit Analysis

WORK EXPERIENCE

Fast Enterprises, LLC – Salt Lake City, UT
Implementation Consultant Intern — Summer 2019

- Interned as a developer on the Vehicle and Dealer Registration System used by all DMV offices in Utah
- Performed End-to-End and Stress Testing for various processes within the VADRS program
- Implemented an internal email subsystem within the program to better facilitate in-office communication
- Worked with QA testers to fix critical production errors in a development-testing-staging-production cycle
- Optimized SQL queries by removing site indexes and reworking index scans into index seeks
- Consulted with business analysts to configure the system to their specific needs
- Documented all classes within 75 business critical VB.NET projects
- Trained full-time employees on how to effectively use the Learning Manager subsystem

PERSONAL PROJECTS

View on my GitHub or Kaggle profile

Recycle Bot — Spring 2020

- Designed a system that can classify and physically sort trash and recyclable waste using Python and Raspberry Pi
- Built platform where waste is photographed, classified using Support Vector Machine, and sorted using Servo motor
- Achieved successful classification of trash and recyclables tested on most common items improperly discarded in the local area

Music Composition Generative Adversarial Network — Spring 2020

- Trained a system of adversarial neural networks to generate melodies corresponding to different genres of music
- Compiled dataset of MIDI songs and designed algorithm to parse musical data and reshape to dimensions needed
- Designed an embedded system that interfaces with an electronic piano for user I/O and live playback of generated melody

Kernel Ridge Regression — Spring 2020

- Programmed Kernel Ridge Regression and Basis Expanded Ridge Regression from scratch using NumPy
- Compared results from Polynomial and Trigonometric kernels and performed model selection using K-Fold Cross Validation
- Achieved 1st place accuracy in graduate level Machine Learning course Kaggle competition

Vector Quantized Variational Autoencoder — Fall 2019

- Created an autoencoder that can encode images into a latent space that is 37.5% the original size of the image
- Designed system to learn useful encoded representations without supervision aiming to prevent posterior collapse of model
- Achieved accurate reconstruction of images from compressed encoding using only a fraction of the original space

LEADERSHIP

Institute of Electrical and Electronics Engineers, Treasurer — May 2018 – May 2020
UMass Skateboard Club, Treasurer — Sept 2016 – May 2020

TECHNICAL SKILLS

SQL Server Management Studio, MySQL, Visual Basic .NET, UNIX, Python, Pandas, Scikit-Learn, NumPy, Prophet, TensorFlow, Keras, Java, C, C++, C#, MATLAB, HTML5, CSS3, JavaScript, MongoDB, AWS