**Zhengyan Lyu**

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**PROFILE:**

Computer science major at Villanova University. Seeking a summer internship software engineering opportunity prior to attending graduate school in Fall 2020. Experience in **machine learning** and **back-end** development. Strong data structure and algorithm skills.

**EDUCATION:**

**Villanova University**, Villanova, PA May 2020

* Bachelor of Science in Computer Science Minor: Mathematics
* Coursework: Deep Learning, Database Systems, Advanced Algorithms, Linear Algebra
* Major GPA:3.83; Overall GPA: 3.60

**SKILLS:**

* + **Programming languages:** Familiar with **Java, Python.** Experience with Oracle SQL, Object Pascal, Html, CSS, JavaScript, C
  + **Technical skills**: **Git**, **Linux**, **Pytorch**, Scikit-learn
  + **Languages:** Native in Chinese, Intermediate in Japanese

**PROJECT AND RESEARCH EXPERIENCE:**

**Computer Vision Deep Learning Undergraduate Research Assistant**, *Villanova, PA* May 2019-Present

* Constructed an Object detection model based on Faster R-CNN model in **Python** with **Pytorch** library
* Preprocessed training images by data augmentation, rescaling and normalization
* Implemented the model on specific weapon datasets by transfer learning and fine-tuning

**Java Software Engineering** **Final Project**, *Villanova, PA* March 2019-May 2019

* Designed and created a music generation application in **Java** in a group of four with **Agile** methodology
* Created a rule-based generation algorithm to generate music based on the preference and random seed inputted by the user

**Webpage Data Inquiry System Project**, *Villanova, PA* September 2018-December 2018

* Designed login and search user interfaces for both administrator and visitors in **HTML/CSS** and **JavaScript**
* Stored data and **hashed** user passwords with **MySQL** relational database system using phpMyAdmin administration tool
* Proceeded with query and edition requests from the webpage with **PHP** on the server
* Edited all code on **Linux** Raspberry Pi remotely and ran **Apache** HTTP Server

**Recommendation System Machine learning Final Project**, *Villanova, PA* September 2018-December 2018

* Built a restaurant recommendation system with **Scikit-learn** using Yelp dataset
* Combined both supervised learning based on past experience of similar users and unsupervised learning based on the attributes of restaurants.
* Designed a user interface for customized parameter input in Html and JavaScript

**ACTIVITIES:**

**Programming Team**, Villanova, PA September 2017-Present

* **15th** place in **ICPC** Mid-Atlantic Region 2019, **2nd** place on Wilkes University site
* Worked in a group of three to solve eight problems using one computer in five hours
* Attended weekly meeting as one of the leaders and assigned and completed weekly assignment on Kattis

**Special Olympic Volunteer**, Villanova, PA

**Day of Service Volunteer**, Villanova, PA