CHIQU LI

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EDUCATION

Columbia University 09/2019 - 12/2020
Master of Science, Mechanical Engineering (Robotics) New York, NY
Wuhan University 09/2015 - 06/2019
Bachelor of Engineering, Power System (GPA: 3.6/4.0) Wuhan, CN
Relevant Courseworks: Cloud Computing & big Data, Databases, Deep Learning, Data Science, Evolutionary Algorithm

SKILLS

Programming: Python, Java, JavaScript, C/C++, SQL, HTML, CSS, Node.js, jQuery, Linux Shell
Tools: AWS, Microservices, React, Django, Flask, Kafka, RESTful, Git, SageMaker, DynamoDB, TensorFlow

PROJECTS

Restaurant Reservation Serverless Website 02/2020
- Built a serverless and dynamic website with AWS S3, API Gateway, Lambda, DynamoDB and Cognito
- Created chatbot using Lex, adopted SQS queue to store information and sent the message by SNS and CloudWatch
- Crawled all NYC restaurant information in Yelp with Requests and stored in Elasticsearch for further search

Full Stack Blog Web Application 01/2020
- Built by Flask and RESTful, users can log in, create, update and delete their existing blog posts
- Used HTML templates, node.js, and WTForms to accept user inputs and used SQLAlchemy as an ORM for a database
- Developed this application on local Git, synchronized to Github where remote web server could pull directly

Image Classification Deep Learning Projects 09/2019 – 12/2019
- Trained and visualized multiple CNN models to classify and recognize 10,000 pictures into specific categories and achieved 98% accuracy based on Google Cloud Computing, TensorFlow Keras and TensorBoard
- Collected a dataset including hundreds of landmark pictures at Columbia University, trained a model from scratch, used data augmentation to improve accuracy and converted it to TensorFlow.js and predict on the webpage

Genetic Programming(GP) Projects 09/2019 – 12/2019
- Conducted Evolutionary Algorithm(EA) to solve Travelling Sales Person Problem and Symbolic Regression, which reached 1% error in 100,000 generations
- Strengthened GP selection method by using Deterministic Crowding and Hierarchical Fair Competition
- Created and visualized a 3D evolved robot with a variable morphology in C++ and OpenGL

Robot Operating System (ROS) Projects 09/2019 – 12/2019
- Accomplished subscribing and receiving joint movements of robots by python packages in Ubuntu16.04
- Developed a cartesian control and inverse kinematics package to manipulate a robot's pose and velocity to ideal positions
- Implemented RRT and A Star algorithm to achieve sampling-based motion planning on KUKA and UR5

INTERNSHIP

Back-end Intern, Gridology -- New York, NY (Remote) 05/2020 - 08/2020
- Conducted a comprehensive course information crawler on 5 universities websites through Beautifulsoup and selenium, cleaned and organized the data, and deployed it on the server for automatic crawler and data analysis
- Maintained the back-end Django database, created APIs for database, and collaboratively developed project on Gitlab

AWARDS

Excellent Student Scholarship 2017 & 2018
1st Prize in National Energy Saving & Emission Reduction Technology Competition 2018
Women's Team Championship of the College Student Tennis Competition of Hubei Province 2017