CHENHAO YANG

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OBJECTIVE

Application for enrollment as a Master student in Mechanical Engineering Program.

EDUCATION

Technion - Israel Institute of Technology *Haifa, Israel*
Bachelor of Science in Mechanical Engineering *Sept.2017-Jun.2021(expected)*
Cumulative GPA: **92.80/100** | TOEFL: **101**

RESEARCH INTERESTS

Classification of 3D Point Clouds using Deep Learning Methods, Autonomous System, Control, Robotics

RESEARCH EXPERIENCE

Classification of Objects Interactions In 3D Scene with Deep Learning Methods *Jun.-Dec.2020*
Advised by Prof. Anath Fischer & Ronit Schneor | Laboratory for CAD & LCE
Israel Institute of Technology
Objective: Classify 3D scenes generated with LIDAR scanner with trained Deep Neural Network.
Core Contents:

- Literature review of 3D scanning and representation processes, methods of classification, machine learning;
- Design and generate training data sets based on STL files and sample as point cloud;
- Training and evaluation of deep neural network by PointNet;
- Analysis of network performance based on various parameters.

PROFESSIONAL EXPERIENCE

Technical intern at Engineering Department *July.-Aug.2019*
CSR-GE Company Limited, Changzhou, China

- Reverse engineering;
- Design of mechanical components on diesel engine;
- Failure mode and effects analysis;
- Railway Track Flaw-Detection Cart project initialization.

HONORS

Technion's excellency scholarship | Spring and Winter semester *2018-2019*
Dean's excellency list | Spring semester *2018-2019*
President's excellency list | Winter semester *2018-2019*
President's excellency list | Spring semester *2017-2018*

PROJECT EXPERIENCE

Design and Planning of Scanning Process for a 6R Industrial Robot Mounted on Cart
Course of Introduction to Robotics *2020 Spring*

- Forward and inverse kinematics analysis of KUKA 6R robot;
- Completed singularity analysis of a 6 DOF family of robots;
- Conducted path planning;
- Completed visualized simulation of robot motion.

Design of Electrical Construction Material Transportation Cart
Course of Design for Manufacturing Project *2020 Spring*

- Completed System Requirement Review (SRR);
- Completed Primary Design Review (PDR);
- Completed Detailed Design Review (CDR).

Simulative Calculation and Design of Tilting Scissor Lifting Mechanism with Simulink
Workshop of Simulation Techniques in Matlab *2020 Summer*

- Constructed the primary configuration of tilting scissor lifting mechanism;
- Built the kinematics simulation with Simulink;
- Adjusted the design with iterative method.

SELECTED PROJECT EXPERIENCE

Takewee——Business Project using Full Methodologies of Lean Startup *2019 Spring*
Course of Organizations and Entrepreneurship

Development of a 3D interactive game with MATLAB *2020 Spring*
Course of CAD System 1

Modeling, System Identification and Close-loop Control of a DC Motor Connected with a Mechanical Load *2020 Spring*
Course of Introduction to Control

Modeling and Simulation of Free/Forced, Undamped/Damped Vibration of Micro Composite Rod
Course of Viberation *2020 Spring*

EXTRACURRICULAR ACTIVITIES

Technion ASAT *2018*

- Helped children with mental deficiency in community;
- Improved the community environment.

Academic Tutor Program *2018-2019*

- Course of Introduction to C;
- Course of Thermodynamics.

Manager of Technion CSSA *2017-2020*

- Organized an event with more than 300 participants about cultural exchange;
- Be responsible for managing publicity department, ten times audience growth.

Volunteer of Technion Anti-Covid-19 Intelligence Group *2020*

- Collecting information of COVID-19;
- Initialized standard operation procedure for quarantine.

TECHNICAL SKILLS

Programming Languages	MATLAB, C, Python, Object-oriented programming, LaTeX
Software/Library	Simulink, Matlab GUI, PyCharm, Pytorch, Tensorflow, Pandas, Numpy Colab, MeshLab, Jupyter Lab, Creo parametric, SolidWorks, ANSYS