

SEON HUN LEE

Mechanical Engineering Student Aspiring for cooperative robotics

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EDUCATION

Graduate Study

Mechanical Engineering

University of Massachusetts Amherst

📅 2020 - Present 📍 Amherst, MA

Bachelor of Engineering

Mechanical and Automotive Engineering

Jeonju University GPA: 3.9/4.5 Dr. Jong-seob Won

📅 2014 - Present 📍 Jeonju, Rep. Korea

AWARDS & DISTINCTIONS

Capstone Design - Smart Mirror

🏆 (Jun. 2019)

- A fully modular personalized information display system (Smart Mirror) designed that distinguishes individuals through dlib neural network system. In order to expedite the process, an array of (total 8) raspberry pi, forming a cluster computing system utilizing MPICH protocol, is used.
- Competed as **School representative in the National Capstone Project**
- Capstone Design Competition(Jeonju University) - 1st Place

COUPLING Competition

🏆 (Nov. 2019)

- Competition held by Coupling Business team (Collaboration between industry and School)
- Conducted research on a synthesized carbon meshes heating element for its efficiency and designing adaptable application.
- Awarded second prize

Bricolage Project - Smart Check-In

🏆 (Jun. 2019)

- Bricolage Project(Jeonju University) - Application of knowledge from curriculum to absolve problems of everyday culture
- Reusing discarded phone to use as check-in system using personalized QR code and Camera as QR scanner that is logged on to remote server.

Programming Class(Python) Teaching assistant

🏆 (Mar. - Jun. 2019) Taught "Programming(Python) course for engineering students".

Research Assistance

🏆 (2016 - 2019)

- SCARA CNC, Drone, Grasping Hand Robot, 4-DOF Robot Arm, Lidar Construction

CERTIFICATE

- GRE 152/162/3.0 (Aug. 2019)
- TOEFL 94 (Sep. 2019)
- TestDAF(German) L4, H5, Sp4, Sc4 (Oct. 2013)
- MOS Masters (Jan. 2014)

INTERESTS

Robotics Arduino Programming

3D Printing Photography IoT AR

Computer Vision Artificial Intelligence

PUBLISHED WORKS

Geometry-based finger kinematic models for joint rotation configuration and parameter estimation

(<https://doi.org/10.1177/1729881420930576>)

Geometry-based finger kinematic models for joint rotation configuration are proposed, describing an individual-specific finger motion during flexion or extension movements as precisely as possible. Geometric relation was parameterized in the model development. From the simulation study, one can see that the models provide one of the feasible and viable solutions to imitate the human finger's flexion and/or extension movements.

Designing Foot Bath utilizing Sheet Resistance in Carbon Mesh (Conference) (04/2019)

- An application on carbon mesh as a heating element that is cost and energy efficient to an arid foot bath. PID controller was applied to the control unit, which aids in efficiency in power consumption. - Proceedings of the KSMPE Spring Conference 2019 - P248

SKILLS

Python, MS Office, Inventor
English, Korean(Native)



Java, Arduino, L^AT_EX, German
3Ds Max, Catia AutoCAD



HTML, JavaScript, ADAMS
Illustrator, Photoshop

