Junyoung Oh

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EDUCATION

New York University Tandon School of Engineering, NY *Jan.2022-Dec.2024*

- *B.S. Integrated Design & Media*

Indiana University Bloomington, IN *Jan.2019-June.2021*

University at Albany – State University of New York, NY *Aug.2017-Dec.2018*

SKILLS

Software & Design

- Proficient in Photoshop, Illustrator, Premiere Pro, InDesign, and Ableton Live. Experienced with digital and sound editing tools, enhancing media and entertainment projects

Coding & Web Development

- Skilled in HTML, CSS, P5.js, Python, and C++. Developed interactive websites and applications, integrating design with functionality

Sound Design

- Utilized Ableton Live and Reaper in various projects to create immersive soundscapes and music compositions, blending technical skills with creative vision

Language

- Native in Korean, Fluent in English.

AWARDS

Korea Talent Award

- **The Award of the Deputy Prime Minister and Minister of Education, High School Students Division, Talent Award of Korea 2015 | November 27, 2015**
  - Hosted by the Ministry of Education
    - Received the award for several awards from the world's renowned robotics competitions, continuous participation in national robotics competitions for the past 10 years, and patent applications for various invention
    - Prize money of 3,000 dollars

ROBOTICS & ENGINEERING

- **PROJECT: MARITIME DISASTER PREVENTION ROBOT - BAY WATCH BUOYBOT**
  - YouTube Link: https://youtu.be/hwx2lQhstOQ
    - DENSO 2nd Place Award in the 16th Robofest 2015 World Championship | May 16, 2015
      Hosted by Lawrence Technological University
      Sponsored by DENSO Corporation, LEGO Education, TOYOTA, The Michigan Council of Women in Technology, etc.

        - Achieved $2,000 scholarship and $100 gift certificate by Mindsensors.com
    - Silver Medal in the 6th Busan Robot Contest | August 22, 2015
      Co-hosted by the Busan Metropolitan City Government and Busan Metropolitan City Office of Education
    - 2nd Place in the 2014 WCRC Robofest Korea | November 22, 2014
        - A preliminary contest in which the winner is qualified for the Robofest world championship
    - Submitted to 2015 Science Fair

INVENTIONS

- **PROJECT 1. FOOT ACTIVATED DOOR CYLINDER**
  - Invented a door cylinder that is activated by a foot
    - Bronze Medal in the 37th Busan Science and Invention Competition for Students | May 7, 2015

- **PROJECT 2. TOILET SEAT ASSISTANCE DEVICE FOR THE ELDERLY**
  - Invented a toilet seat assistance device designed for elderly people
    - 1st Place, Gold Medal, Creativity Category Challenge, in the Korea Robot Olympiad 2012 | August 11, 2012
    - Bronze Medal, Creativity Category Challenge in the 14th International Robot Olympiad 2012 | December 20, 2012

- **PROJECT 3. MEASURING CUP FOR THE VISUALLY IMPAIRED**
  - Invented a measuring cup for visually impaired people
    - Bronze Medal (Bestowed by the Chairman of the Federation of Korean Industries) in the 29th Korea Student Invention Exhibition | July 21, 2016

- **PROJECT 4. FLYING AUTONOMOUS MAGLEV AMPHIBIOUS CAR**
  - Invented a flying autonomous maglev amphibious car
    - 3rd Place, Bronze Medal, Exhibition Senior Division, in the 2015 WCRC Robofest Korea | December 27, 2015
      Hosted by the Ministry of Trade, Industry and Energy

- **PROJECT 5. PORTABLE WALKER ROBOT FOR THE ELDERLY**
  - This robot was inspired by the tasks required in the homes of elderly people who live on their own and this device will work as a walker to help the elderly not only inside and outside the house
    - Submitted to DST Robot Multi-Mission Challenge 2016

- **PROJECT 6. RETRACTABLE FORDABLE WALKING AID**
  - This invention was developed in Project 5 (Portable Walker Robot For The Elderly) and this device automatically adjusts the length of the walker's legs when the elderly use the escalator.
    - Bronze Medal in the 6th World Youth Olympiad KIYO4i 2021 | October 11, 2021
    - Submitted to Social Venture Competition 2021

DESIGN & MEDIA

- Special Prize, Youth Division in Gender Equality Design Awards | August 9, 2016
  Hosted by Korean Institute for Gender Equality Promotion and Education
  - [Concept of the work]
    “Working Man - Pregnant Woman” and “Working Woman – Parenting Man” after giving birth were depicted in pictures and emphasized in words in the frame of the values pursued by modern society such as human rights, equality, cooperation, and humanism

DIGITAL PRODUCTION

- Qualified for a screening at the festival in the Middle and High School Students Division, The competition lineup in the 15th Korea Youth Film Festival | November 18 ~ 22, 2015
  Hosted by the Korea Youth Contents Art Agency
  - Directed “Marine Boys”

- Runner-up in the Youth Division, Inspiring Hope Medal in the 8th Seoul World Short Film & Video Festival | December 19, 2015
  Hosted by the Korea Visual Arts Association
  - Directed “Marine Boys”

OTHER AWARDS

- Dean’s List for Fall 2022-Spring 2023 at New York University | May 2023
- Dean’s List for Spring 2018 at University at Albany SUNY | May 2018
- Technical Award and Principal’s Special Award at Haegang High School | February 14, 2017
- Honor Roll in Earth Science at Haegang High School | February 14, 2017
- Three-year Good Attendance Award at Haegang High School | February 14, 2017
- Academic Achievement Award in English, Haegang High School | December 31, 2014

PATENT LICENSES

Holder of several patents, including a "Foldable Walking Aid" and "Maritime Disaster Prevention Robot," underlining innovation and practical application of design and engineering skills.

Foldable walking aid

- Registration No. 1020753210000 | February 3, 2020
- Application No. 10-2019-0169577 | December 18, 2019

Maritime disaster prevention robot - Bay Watch Buoybot

- Registration No. 1017337520000 | April 28, 2017
- Application No. 10-2015-0130504 | September 15, 2015

Toilet Seat Assistance Device for the Elderly

- Application No. 10-2012-0086841 | August 8, 2012

WORK EXPERIENCE

Intern as a Robot Engineering apprentice, JRC (Robot R&D Lab, School Education) | August 8 ~ October 13, 2021

• Participated in diverse projects, from eco-friendly greenhouse systems to advanced robotics, applying hands-on engineering and design principles

- An Up-Down Chamber for Measuring Photosynthetic Ray by Seoul National University | August 8 ~ 20, 2021
  - Design and Building Shafts with Lathe and milling Machines Manually (18 hrs)
  - Assembling the Box with Socket Connectors and Making a base Panel Manually (13 hrs)

- Eco-GreenHouse Cooling-Heating System by Innature Co.,LTD, Daejeon Korea | August 23 ~ September 2, 2021
  - Design and Building the Rack for a test bed with al. profiles (740 X 680 X 1350 mm) (8 hrs)

- Boxes for electronic sensor circuits by 3D-Printer (MakeBlock) | September 6 ~ 18, 2021
  - Drawing and Molding 5 boxes with a 3D printer, Fusion 360 (52 hrs)

- Cracked Egg Detection Vision Machine with High-Power(10W) Laser By BGO Ltd. | September 29 ~ October 8, 2021
  - Supporting Fixture for Laser Gun and 45'-Mirror-Prism with 3D-Printer (21 hrs)

- Technical Teaching to Young Students(2 persons) | September 9~ October 10, 2021 (Weekend)
  - Fusion 360 Design and Modeling (6 hrs)
  - Operating and Interfacing 3D-Printers (5 hrs)

- Data Logger of Heated Roller Drum | September 12 ~ October 12, 2021
  - Panel for Temperature Sensors, Heating Fan
  - Design and Machining Body, Roller Shafts

COMMUNITY SERVICE

Volunteer, Sebit Christian Day Care Center | July 2015 ~ June 2016

• Educated students in robotics and programming at Sebit Christian Day Care Center and Busan Robot Industry Association, fostering scientific curiosity and creativity

- Taught robot building to students between 4th and 6th grades in the facility
- Taught programming and robot building by using ‘School Kits’ that are used in the after-school program
- By building robots, the students learned the principles of basic science and were encouraged to become curious and think creatively. Such scientific backgrounds are expected to help the students set their academic goals and paths in the future

Volunteer, Busan Robot Industry Association | August 2015, August 2014

- Participated as a volunteer in the family experience program organized by the Busan Robot Industry Association, the host of the 8th 2016 Busan Robot Contest
- Offered operational support and computing service at the 6th 2014 Busan Robot Contest

Volunteer, Hongik Child Welfare Center | August 1 ~ 8, 2014

- Provided educational support and guidance for the students in the facility

School Robot Club | March 2015 ~ February 2017

- Lead team members to participate in volunteer work at a children's home and to attend robotics competitions to win several awards

CERTIFICATES

COURSERA

• Completed courses in Robotics and Digital Manufacturing with Autodesk Fusion 360 through Coursera, enhancing skills in aerial robotics, digital manufacturing, and mechanical design

- **Robotics: Aerial Robotics**
  - An online non-credit course authorized by the University of Pennsylvania and offered through Coursera
  - August 28, 2021

- **Intro to Digital Manufacturing with Autodesk Fusion 360**
  - An online non-credit course authorized by Autodesk and offered through Coursera
  - September 8, 2021

- **Modeling and Design for Mechanical Engineers with Autodesk Fusion 360**
  - An online non-credit course authorized by Autodesk and offered through Coursera
  - September 13, 2021

- **Robotics: Estimation and Learning**
  - An online non-credit course authorized by the University of Pennsylvania and offered through Coursera
  - September 16, 2021

MILITARY SERVICE

Served and Discharged from Auxiliary Police SWAT as Admin Sergeant

- January 2, 2020 ~ July 14, 2021