Chad Paik

3B Mechatronics Engineering
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SKILLS SUMMARY

- Knowledgeable in Python, MATLAB, Kot;lin, C, C++, and Java
- Well-versed with Keras through various projects and paper implementations
- Experience in Android development using Android Studio
- Hardware experience with Arduino, Raspberry Pi, and microcontrollers
- Familiarity with ROS Kinetic

Work Experience

Software Engineering Intern
VoyagerX Inc.
Seoul, South Korea
Jan 2019 – Present

- Experimenting with different GAN architectures to create multilingual font using only English font using Keras
- Aided in pre-processing of audio data for speaker diarization problem
- Designed the initial prototype of mobile video editing application

Biomedical Research Assistant
Sunnybrook Research Institute
Toronto, ON
May 2018 – Aug 2018

- Applied statistical shape modelling technique to develop custom craniomaxillofacial implant using Python
- Developed Android Wear application to be used for IMU data collection
- Adopted CNN and LSTM layers to perform human activity recognition

Engineering Teaching Assistant
University of Waterloo
Waterloo, ON
Sept 2017 – Dec 2017

- Supported 6 different first year courses through sessions and office hours
- Hosted multiple review sessions with attendance of 250+ students
- Recipient of Sanford Fleming Outstanding TA Award

Research Assistant
BBCR Lab, University of Waterloo
Waterloo, ON
Jan 2017 – Apr 2017

- Utilized Socket programming through Python to develop test procedures for vehicular network research
- Performed data transfer with text, image, video, and live stream to test latency between vehicular nodes
- Responsible for equipment purchase and location selection

PROJECTS

Self-Navigating Robot
Sep 2018 – Nov 2018

- Created robot that overcomes a wall, navigates to waypoint, and returns
- Programmed the navigation and target detection algorithm using Arduino

UW Robotics Team
Jan 2018 – Mar 2018

- Programmed custom matrix library used for inverse kinematic node
- Designed inverse kinematic node that solves the movement based on pilot's control using Xbox controller

Spine Shape Analysis
Sep 2018 – Dec 2018

- Analysed the variance of shapes present in posterior arch of C1 spine required for improved design of custom spine implants using PCA

Project Beowulf
Nov 2015 – Apr 2016

- Prototyped exoskeletal glove aimed to enhance grip strength
- Classified EMG data from Myo Armband to anticipate motion of user's hand
- Selected as top 100 projects in Hackaday Prize competition

EDUCATION

Post-Secondary Education
University of Waterloo
Sept 2015 – present

- Candidate for Bachelor of Applied Science in Mechatronics Engineering
- Placed 7th out of 81 in 3B term