Li Yu Hong

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Education

- **National Yang Ming Chiao Tung University** Hsinchu, Taiwan — Sept. 2020 – Present
  M.S. Computer Science and Network Engineering
  High-Speed Communication & Computing (HSCC) Lab
  Courses: Computer Vision, Machine Learning for Networking, Algorithms
- **National Chiao Tung University** Hsinchu, Taiwan — Sept. 2016 – June 2020
  B.S. Computer Science
  Courses: Operating System, Wireless Networking, System Administration, Compiler Design

Professional Experience

- **Software Engineering Intern, MediaTek Inc.** Hsinchu, Taiwan — Jul. 2021 – Aug. 2021
  - Developed an FPGA test script automation to check the results automatically (Tera Term Language, Python)
  - Maintained a Protocol Testing Automation Tool, developed and solved json format issues (Qt, C++)
  - Researched protocol analyzer and exerciser script language and studied USB 2.0 Specification
- **Software Engineering Intern, ITRI** Hsinchu, Taiwan — Jul. 2019 – Aug. 2019
  - Investigated security on 5G Core Network and MEC
  - Increased efficiency for Application Performance Management (APM) deployment by recompiling the kernel and built it into docker
  - Assisted in testing the RabbitMQ functions in APM (C++)
- Teaching Assistant - Introduction to Embedded Systems Design and Implementation (Python/Pi) and IoT Devices and Platforms (Arduino)

Selected Projects

- **IMU-Guided Human Motion Prediction under Complete Occlusion (Thesis)** — Oct. 2021 – Present
  - Architected a Cross-Fusion GCN for integrating visual and inertial data for 3D human pose prediction, by decreasing errors for 20% while using only 40% parameters
  - Inspired how different sensor layouts could influence certain human motion
- **UPDRS Level Detection and Analysis (Python)** — Dec. 2020 – Sep. 2021
  - Developed hand tapping recognition and Gait detection targets to build models assisting medical doctors in predicting the UPDRS level
- **Sport Recognition and Analysis (Python)** — Aug. 2020 – Dec. 2020
  - Developed an algorithm for Biking Recognition with Openpose implemented pose landmarks to calculate the RPM, shifted angle of knees horizontally and vertically
- **AI Volleyball Tracking (Python)** — Mar. 2019 – Jan. 2020
  - Remodeled the TrackNet (CNN) Model and applied on volleyball tracking
  - Developed program to predict hitting-points and hitting-times and to obtain the court lines and human's position by OpenCV and Yolov3

Additional Information

- **Programming**: C/C++, Python, Shell Script, Familiar with Unix/Linux Platform
- **Other CS skills**: Docker, Bash, Git, Raspberry Pi , Arduino and a variety of sensors' application
- **Award and Scholarship**: Foxconn-NYCU AI Research Scholarship, Quarter-finalists of Tennis National Intercollegiate Athletic**,** NCTU Elite Athletic Award
- **Exchange Programs**: Mannheim University, Germany, 2020; RYE at NIGE and KGS, Germany, 2014
- **Language**: Native in Chinese, English: Toefl IBT 86, Toeic 765, Fluent in German, Basic in Spanish