

Name: Ting Che Lin

# Ting-Che Lin

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## EDUCATION

**New York University Abu Dhabi**, Abu Dhabi, UAE 2013 – 2017

Bachelor of Science, Mechanical Engineering, GPA: 3.91

Selected relevant electives: Sensor Based Robotics; Online: Scalable Machine Learning (EdX), Artificial Intelligence for Robotics (Udacity), Introduction to Computer Vision (Udacity), Deep Learning (Udacity)

## HONORS AND LEADERSHIP

First Place, United Arab Emirates Drones for Good Award (Award of ~US\$272,000) 2015

First Place, NYUAD International Hackathon for Social Good in the Arab World 2015

**Wadi Drone**, Abu Dhabi, UAE June 2014 – July 2015

(student initiative in the NYUAD Innovation Lab)

*Co-Founder/Chief Developer*

- Led the development of the Wadi Drone, a drone that aids the conservation of Wadi Wuhayah, the first National Park of the UAE, by reducing data retrieval cost by 80%
- Implemented the command protocol and the parsing system using RegEx and Python
- Developed a long-range photo transmission system using Xbees and Wi-Fi network
- Drafted the online documentation of Wadi Drone using MkDocs
- Gave oral presentation of the technical solution to the Wadi Wurayah park managers

**NYUAD International Hackathon for Social Good in the Arab World** April 2015

*Chief Hardware Developer*

- Developed and prototyped the electronic hardware for Hakeeme – the winning project that monitors the health of migrant workers and protects them against abuses
- Presented the project to a group of judges consisting of government officials and industry leaders.

## PROFESSIONAL EXPERIENCE

**NYUAD Biomechanics Laboratory**, Abu Dhabi, UAE May 2015 – Present

*Research Assistant/Capstone Thesis Research*

- Designed and built the first working prototype of the patented device that predicts plant strength
- Used Op-Amp, virtual ground, and force sensitive resistor to design a linear response force sensor
- Defined requirements for the next version prototype using user feedbacks and prioritization matrix
- Increased product reliability by eliminating moving parts and incorporating contactless rotary sensor
- Designed custom PCB for compact electronic fitting and noise filter for analog signal processing

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**Yilai Precision Instrument**, Taoyuan, Taiwan

June 2016 – August 2016

*Intern*

- Participated in the research and development of a state of art Silicon Wafer Scraper
- Redesigned an air filter system that would reduce the cost of the system by more than 30% using off-the-shelf components

**Brooklyn Atlantis Citizen Science**, New York, USA

October 2015 – May 2016

*Research Assistant*

- Implemented motion entropy and texture based water segmentation algorithm intended for robotic boat autonomous navigation using C++ and OpenCV library
- Implemented the Law's Mask Texture Energy Measure and c1c2c3 shadow invariant color-space conversion algorithm

## TEACHING EXPERIENCE

**Engineering Design Studio**, Abu Dhabi, UAE

August 2016 – Present

*Laboratory Assistant*

- Hold workshops for 3D printer and laser cutting
- Advised several students led projects with solution and technology selection
- Assisted students work with electronics troubleshooting and code debugging

**BiggerLab**, Shanghai, China

August 2016

*Instructor*

- Collaborated with the BiggerLab founder to design a curriculum of a 7-day intensive engineering boot camp for talented students from top Shanghainese high schools
- Trained and led a team of 2 TAs to teach the class of 12 students, receiving 4.8/5 instructor rating

## INDEPENDENT PROJECTS (Portfolio: [tcl326.github.io](http://tcl326.github.io))

- **EKF-SLAM**: Implemented Extended Kalman Filter SLAM algorithm on Matlab for VREP robotics simulations
- **Pitcher**: Implemented a pitch and roll sensor using IMU by fusing accelerometer and gyroscope data using Kalman Filter on Arduino

## TECHNICAL SKILLS

**Software & Library**: Proficient in Arduino, TensorFlow, SolidWorks, Autodesk Inventor, OpenCV, openFrameworks, Processing; Experienced with ANSYS, EAGLE, GitHub, RaspberryPi; Familiar with Bootstrap, Apache Spark

**Computer Language**: Proficient in Python, Matlab, C/C++; Experienced with HTML & CSS

**Prototyping Skills**: Proficient in 3D printing (SLA,FDM,SLS), 80/20 Framing Systems, Laser Cutting

## ADDITIONAL INFORMATION

**Languages**: Native fluency in Mandarin, English, and Spanish

**Places Lived**: Taiwan (1994-2005), El Salvador (2005-2013), United Arab Emirates (2013-present), New York City (2015-2016)