Tzu-Hsuan Chuang

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ENGINEERING EXPERIENCE

R&D Engineer, *CUUMed Catheter Medical, New Taipei City, Taiwan* Sep. 2020 – Present

- Lead a 3M dollar project to develop next gen **Intravascular Occluding Catheter** for a Hong Kong customer.
- Develop new coating formulation for **ureteral stents.**
- Sustained new project development and product extension project.

Relative EXPERIENCE

Master, BioMedical Engineering, NCKU Feb. 2019 – June. 2020

- Develop **a Novel Radiotherapy Approach Using Nanomedicine For Keloids Treatment.**
- Develop **a prototype electrospinning device for the production of biobased nanofibers.**
- Develop **an Arduino model to detect the inspiratory flow rate.**

Project Management, Medical Device Innovation-BioDesign, NCKU Feb. 2019 – June. 2020

- Coordinated with clinical doctors or researchers, during and after the study on an ongoing basis, to meet the quality requirements of the project.
- Worked with classmates to gain early exposure to clinical need identification, stakeholder interviews, ideation, and prototyping. To learn how medical innovations are brought from concept to clinical adoption.

Research Assistant, Training Program for Interdisciplinary Talents of Biomedicine and New Agriculture, NCKU Jun. 2018 – Jan. 2019

- Accomplished milestones of the Training Program project

Oral Presentation, 2017 & 22nd Symposium of Association for Chemical Sensors in Taiwan May. 2017

- Published the IVD test kits for Kiwi allergen

Internship Programs, Yungshin Pharmaceutical Industrial Co. Jul. 2016 – Aug. 2016

- Conducted the Fermentation process development for hyaluronic acid.
- Participated in individual and company training programs to advance good biotech, management, communication, and presentation skill.

SKILLS

Computer:

- **Python**: Experience in using various packages in python-using Pandas module to analyze data.
- **SolidWorks**: Perform product or mold design analysis, simulation, testing reports and eliminate design mistake.
- **MATLAB**: Develop model to trace Nano Particle from Ultrasound Image.
- **Arduino:** Design a prototype to measure the air flow rate in Catheter.

Lab Analytical Instruments:

- **TEM**: 3D cell culture to obtain profile image of material for nano structural analysis
- **FTIR**: Detect chemical substance released from nano particles.
- **HPLC**: Measure the ability of Drug Loading into and In Vitro Release from Nanosized Drug Delivery Systems

AWARD

E-Wearing - the Honorable Mention Award at the Biomedicine Innovation DEMO Day contest Dec. 2019

EDUCATION

Masters in Biomedical Engineering, National Cheng Kung University, Taiwan Feb. 2019 - Aug. 2020
Bachelor in Biotechnology Program, National Chung Hsing University, Taiwan Sep. 2013 - Feb. 2018

COURSE

The Complete Python Pro Bootcamp for 2021-Udemy Online Dec. 2020 – Present

運用 Arduino 打造生活中有趣實用的感測服務-TibaMe Aug. 2019 - Nov. 2019