Yi-En Chou

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Personal Profile

As a Mechanical Engineering graduate, I am also a junior contributor in open-source community in software and yarn to learn and contribute more to engineering. Primarily, looking for firmware engineering role.

Education

National Tsing Hua University   *Hsinchu, Taiwan ROC*
                                                                                    AI and Mechatronic
M.S. in Power Mechanical Engineering   Informatics Cluster

JUl 2021 - AUG 2023
- GPA 3.99/4.3
- Computational Fluid Dynamics Lab
- **Courses** Algorithm | Software Project Management | Computational fluid dynamics | (Deep Learning)
- **Thesis topic** Impact of Loss Weight and Model Complexity on Physics-Informed Neural Networks for Computational Fluid Dynamics. Conduct dimensional analysis on hyper-parameters to improve efficacy of neural network in prediction flow behavior.

National Tsing Hua University   *Hsinchu, Taiwan ROC*
                                                                                    Electrical and Control
B.S. in Power Mechanical Engineering   Cluster

Sep 2017-Jun 2021
- GPA 3.42/4.3
- **Courses** Data Structures | Programming Design | Control System | System Dynamics Analysis | Numerical Analysis | Introduction to Artificial Intelligence | Gas Phase Dynamics | Advanced Fluid Dynamics | Flight Mechanics | Kinematics of Machinery | Mechanical Vibrations | Introduction to Finite Element Methods | Thermal and fluid Science | Applied Mechanics | Mechanics of Materials | Electronics | Manufacturing Processes | Work Shop Practices | Computer Aided Machine Design and Drawing
- **Project** Automatic Measurement Instrument for Macro and Micro-scale Stresses. First Prize award in National Applied Research Laboratories Instrument Technology Innovation Competition.

Experience

Sciwork   *Hsinchu, Taiwan ROC*
Open source contributor   *Jun 2022–Present*
- Keep blog to retain knowledge and self teach. `https://en-chou.github.io/`
- Collaborator of Solvcon, works include editing latex numerical note, adding tex linter along with CI executions to project and more.
- Teemed with 5 other contributors in holding 2 monthly off-line events and attended 4 monthly off-line event for discussion on computer code for scientific, numerical, and engineering work, which has around 20 participants per event.
- Presented in an unconference in CONCOM(CONference for open COMmunities) 2022 x OCF to audience of 50+ open-source contributors.
- **Technical Skills** Linux CLI | Makefile | CI executions
- **Soft Skills** Communication | Presentation | Collaboration | Troubleshooting | Lifelong learning

National Tsing Hua University Department of Power Mechanical Engineering   *Hsinchu, Taiwan ROC*
Teaching assistance   *Feb 2022–Present*
- Computational Fluid Dynamics. Gave TA courses, aided with students' problems, and marked for programming submissions and examinations.
- Thermal and Fluid Science II. Held topic discussion, aided in preparing course material, kept track of the course status and mark for examination.
- **Soft Skills** Communication | Presentation | Multi-tasking

National Tsing Hua University Computational Fluid Dynamics Lab   *Hsinchu, Taiwan ROC*
Server maintenance   *Jul 2021-Present*
- Setup environment of server operated on Linux for computation purpose, and reach for further assistance when trouble is beyond our reach.
- **Technical skills** Linux CLI
- **Soft Skills** Communication, troubleshooting.

Keyarrow INC.   *Taichung, Taiwan ROC*
Computer Aided Design Intern   *Jul 2018-Aug 2018*
- Computer Aided Design with Pro-E on sheet metal.
- **Technical Skills** CAD with Pro-E
- **Soft Skills** Communication, Real world experience.

University Projects/ Course works

Automatic Measurement Instrument for Macro and Micro-scale Stresses *Hsinchu, Taiwan ROC*

National Tsing Hua University Photomechanics Lab *Feb 2020-Dec 2021*

- Enabled automatic measurement on Macro and Micro-scale Stresses and developed modular design for the experiment setup, 80% reduction in total measuring time.
- Wrote code for automating measurement and building user interface via LabView and mechanical design utilizing Inventor.
- Won First Prize award in National Applied Research Laboratories Instrument Technology Innovation Competition among 10+ teams in final round.
- **Technical Skills** Labview | Inventor
- **Soft Skills** Presentation | Collaboration

Course works *Hsinchu, Taiwan ROC*

National Tsing Hua University | National Yang Ming Chiao Tung University

- (Computational Fluid Dynamics) A numerical code in C++: `https://github.com/EN-Chou/Projection_algorithm`
- (Computational Fluid Dynamics) A numerical code in C++ using Message Passing Interface(MPI): `https://github.com/EN-Chou/Heat_Convection_and_diffusion-MPI`
- (Algorithms) A divide and conquer code in C++: `https://github.com/EN-Chou/algo`

Skills

Programming	(Experienced) C++	Matlab	Python
Miscellaneous	Linux	Shell (Bash)	LaTeX	Git and github	LabView	Autodesk Inventor	Pro-E	Ansys-Fluent	Adams	Tecplot	MPI
Language	Mandarin(Native)	English(TOEFL 105)	Japanese(N5)

Interests

Basketball	I engage in the department women basketball team for 6 years, we share experience, tactics, sweats and laughters.
Surfing	Surfing came to my life since my working-holiday in a surf shop 2019, bringing both mental and physical health.
Technical Writing	I write blogs to record what I have learned and do some web-page design in `https://en-chou.github.io/`.
Photography	I enjoy technology and beauty in life, photography nurtures my sole.