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| **Education** | |
| **National Cheng Kung University (NCKU)**  Master of Biomedical Engineering (Medical Electronics and Information group)  **National Cheng Kung University (NCKU)**  Bachelor of Systems and Electromechanical Engineering | **2017.09 – 2020.08**  **2013.09 – 2017.06** |
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| **Work experience** | |
| **Software Engineer, MPI CO., LTD.**   * Semiconductor equipment software development (wafer inspection function, machine control, and UI design). * Importing customer requirements and troubleshooting.   **Process Engineer, CYNTEC CO., LTD.**   * Introduction and improvement of automotive resistor manufacture process. * Using QC tools to analyze NG products. | **2021.11 – Present**  **2020.09 – 2021.10** |
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| **Technical skills** | |
| **Programming languages:** C, Matlab, Python, C#, C++  **Software tools:** Visual Studio,Solidworks, AutoCAD, Rhinoceros, SPSS  **Analysis devices/tools:** 2.5D, X-ray,Process capability analysis, QC 7 tools  **Equipment:** Laser Marking, Solder Paste Printer, SMT, Vapor Phase Soldering  **Certificates:** ITRI SECS/GEM Communication Technology, TOEIC:765, TOEFL iBT:78(L:19; R:22; S:17; W:20) | |
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| **OJT and Self-Directed Learning** | |  |
| **OJT In MPI**   * SkillTree OOP Workshop (using C#) * ITRI SEMI SECS/GEM Communication Technology Workshop   **Self-Directed Learning**   * Operating System – NTHU Dr. Jerry Chou’s OCW * Algorithm – self-study * Data Structure – self-study   *My Coding Practice Note:* [*https://reurl.cc/KbQaMn*](https://reurl.cc/KbQaMn) | |  |
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| **Project Achievements** | |  |
| **In MPI**   * **Offline Recipe Editor Tool (In progress)**   Design a tool that can modify recipe parameters without starting AOI software.  Benefits  1. It is expected to save at least 66% of the time to modify the recipe.  2. Support batch editing.  **In CYNTEC**   * **Uptime of Vapor Phase Soldering Improvement Project**   Design load/unload and layout method according to the man-machine chart and design experiments to adjust the relevant parameters.  Benefits  1. Increase UPH of Vapor Phase Soldering process by 80%.  2. Reduce operators from 3 to 2.   * **Solder Paste Soldering Void Improvement Project**   Adjust jig tolerance and reflow profile to reduce void occurrence.  Benefits  Monthly yield increased from 98.5% to 99.2%. | |  |
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| **Thesis** | |  |
| **Application of Hybrid Brain-Computer Interface Integrated with a Single-Axis Robot for Neurorehabilitation**  Acute cerebrovascular accident was one of the main cause of death in Taiwan, and it causes hemiplegia, loss of sensation and unclear speech, etc. The principle of neurorehabilitation is to activate the adjacent area of the damaged brain cortex of the patient to replace the lesion parts so that the patient can restore the function of daily living.  This research integrates the steady-state visual evoked potentials (SSVEP) and event-related desynchronization (ERD) to develop a hybrid brain-computer interface system for controlling the rehabilitation machine to perform rehabilitation simulation. Twelve normal subjects were recruited in this research. By the SSVEP selector as the control variable, subjects were divided into the control group and the experimental group, and perform the system testing and 4-week rehabilitation simulation. The success rate of ERD classification and the time to reach the maximum ERD were used as indicators to compare the effects of hybrid and single feature on neurorehabilitation. The results showed that in terms of the ERD success rate, the average of the experimental group in week 3 and week 4 was slightly higher than that of the control group. As for ERD happened time, a steadily improved trend could be seen in the experimental group. The average happened time at week 4 was about 0.16 seconds smaller than that of week 1. Besides, the experimental group was faster than the control group from week 2 to week 4. In addition, it was also found that SSVEP accuracy had a moderately positive (ρ=0.55) correlation with the success rate of ERD classification and had a moderately negative correlation (ρ=-0.60) with the ERD happened time.  In conclusion, this research has developed a single-axis rehabilitation robot for upper limbs controlled by a hybrid brain-computer interface system, which can perform rehabilitation simulations on normal subjects and proves that the hybrid feature system has a better effect on neurorehabilitation. In the future, more subjects especially stroke patients should be recruited to test the system to improve the reliability and robustness of the system. | |  |

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| **Autobiography** |
| My childhood started in Kaohsiung. I moved to Tainan to attend National Cheng Kung University in 2013. I majored in Systems and Electromechanical Engineering. Taking up many courses related to programming language, control theory, and system integration, I was particularly interested in programming and electromechanical control, which not only improved my logical thinking ability but also gained a lot of problem-solving experiences from implementation. During this time, I attended the pop dance club at NCKU. I often participated in performances and competitions on and off the campus, which makes me more confident. In addition, I held a Year-End Show with other members of the club in 2015. I was responsible for assigning jobs and ensuring the progress of all assignments are achieved. This experience had me learn leadership and the ability of time management. In my senior year, I took several courses in the Department of Biomedical Engineering, which apply stiff engineering knowledge to clinical medicine to benefit society, which was fascinating and meaningful, so I decided to apply for the Department of Biomedical Engineering at NCKU.  Under the instruction of Dr. Tai-Hua (Douglas) Yang, an orthopedic physician at NCKU Hospital, and Professor Ming-Shuang Ju., Department of Mechanical Engineering, I finished my master’s degree in Biomedical Engineering in 2020. My main research was about physiological signal processing and electromechanical system control and applied them to rehabilitation medicine. My thesis was to use brain signals to control rehabilitation robots and explore the feasibility of medical intervention for stroke patients. The process of system design has greatly improved my programming ability, and I also have a deeper understanding of communication principles and signal processing algorithms. Furthermore, I can also use statistical software like SPSS to analyze the results of the experiment. Currently, 12 normal subjects had been recruited to test the system. The process of studying the master’s degree has brought me 2 points of improvement. Firstly, negotiating with experts with different backgrounds forces me to improve my expression ability and to learn interdisciplinary knowledge. Secondly, the ability to problem-solving and decision-making has been cultivated, because I must spur myself on target continuously.  I joined CYNTEC by the MA plan as soon as I graduated. I served as a process engineer in the Department of High-Power Resistance. My main job responsibility includes process introduction, improvement, and troubleshooting. While working here, I gained some know-how on the AOI and SMT process. I had to discuss the details of defect detection with the equipment manufacturer's software engineer to acquire the best parameters, and I often used QC tools to improve process quality.  I often cooperated with colleagues from different departments, which allows me to master the ability to teamwork and communication skills.  Since I found myself more passionate about programming and system development, I left CYNTEC where I worked for a year, and started working as a software engineer in the Platform Development Department of MPI. My main tasks include function development and UI design of wafer inspection equipment or improving user experience and detection accuracy according to customer requirements. In addition to learning many UI design skills, I also increased my knowledge of machine vision algorithm. Moreover, I have also trained my communication and work scheduling skills while assisting clients with troubleshooting.  Currently, I continue to use my off-duty time for further studies, learning subjects such as Data Structure and Operating System. I also use LeetCode to train my programming and algorithmic skills for personal growth in the professional field. In my future career, I would love to contribute my ability to my colleagues as much as I can to make my team succeed. Thank you for reading this autobiography, I would be grateful if you would give me an opportunity for an interview. |