CHAINATEE TANAKULRUNGSON

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EDUCATION

Northwestern University — Evanston, IL
Master of Science in Robotics, GPA: 3.875/4.00 — Anticipated Dec 2017
Relevant Courses: Advanced Mechatronics, Statistical Pattern Recognition, Machine Learning, Optimal Control, ROS Programming

Chulalongkorn University — Bangkok, Thailand
Bachelor of Engineering in Mechanical Engineering, GPA: 3.56/4.00 — Jun 2011 - Aug 2015

WORK EXPERIENCE

Human Robotics Lab, Chulalongkorn University and Hospital — Bangkok, Thailand
Research Assistant, Mechanical Design and Market Research | CATIA, Arduino — May 2015 – Jul 2016

- Developed a prototype of a static wrist holder for an exoskeleton with a mobile transmission system for Brachial Plexus Injury (BPI) patients whose arm movements are limited due to a nerve injury
- Led primary market research and contributed to the final prototype which is currently undergoing clinical trial

Bangkok Bank — Bangkok, Thailand
Student Intern — May 2015

- Developed process planning to help small size logistics solution providers adapt GPS into their business model
- Presented comprehensive business plan to Management team and awarded first prize in the Business Plan Competition

Siam Kubota Corporation Co., Ltd. — Chonburi, Thailand
Siam Kubota Challenge 2014 Production Engineering Intern | Programmable Logic Control — Mar – Jul 2014

- Designed logic map and a fool-proof system circuit to minimize defects in tractor engine assembly line by safeguarding against failure to torque engine nut
- Optimized an engine assembly process by improving the 2-hand operation to perform 10 seconds faster than normal production time

ENGINEERING PROJECTS

Flying Ball Catcher Robot Project — Evanston, IL
Algorithm Programmer | Python, ROS, OpenCV, Asus Xtion Pro Live Motion Sensor — Jan 2017 – Present

- Designed and implemented algorithm to detect the position of a flying ball, calculate the future position and move high precision manufacturing robot arm to catch the ball

Self-driving Mechatronics Car Project — Evanston, IL
Developer | C, Android, Electromechanical System — Jan 2017 – Present

- Coded feedback controlling system for DC motor to follow desired cubic trajectory within 200 milliseconds and reduce overall error to 12.4 degrees
- Showcased an autonomous line-following car with capability to change direction in real-time for the 2017 Advanced Mechatronics Design Competition

Touchback Project: The System for Recording and Replaying Texture on Haptics Screen — Evanston, IL
Mechanical Designer | SolidWorks — Jan - Mar 2017

- Prototyped sinusoidal grating panel for recording material texture that can be played back on haptics screen and allow users to sense simulated surface roughness from vibration

The Baxter Bartender Robot Project — Evanston, IL
Developer, Inverse Kinematics | ROS, Python — Sep - Nov 2016

- Programmed and operated collaborative manufacturing robot as a bartender localizing, moving and grabbing objects with inverse kinematics solution

LEADERSHIP

Little Builders Project — Bangkok, Thailand
Design Coach | Design Thinking Process — Dec 2015 - Feb 2016

- Supervised high school student project to create smart sustainable waste-collecting water wheel to improve the condition of the Phra Kanong canal

SKILLS

C++, C, Python, Java, MATLAB, ROS (Robotics Operating System), CATIA, SolidWorks, Linux Environment, Electromechanical System, Printed Circuit Board Design

AWARDS

- Tanakulrungson, C., Ativeerakul, C., Glankwahmdee, J., & Wannasuphoprasit, W. (2015, Dec). *Design and Development of a pinch rehabilitation device*. Conference talk presented at the International Conference on Mechanical Engineering by Thai Society of Mechanical Engineers, Petchburi, Thailand.
- 2013 Best Overall Design award for designing new Lilo and Stitch simulation game in Disney's Ultimate EnginEARing Exploration