

ORNWIPA THAMSUWAN, Ph.D., Engineer-in-Training
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Skills | Abilities

Technical Competence

- Strong background in mathematics, statistics, industrial engineering and operation research
- Knowledge in machine learning, artificial intelligence, natural language processing
- Proficiency in data analysis, programming with Python, R, MATLAB
- Familiarity with Linux command line, parallel computing, and Git version control
- Expertise in using sensors, i.e. accelerometers, heart rate monitors, electromyography, GPS

Communication

- Experience and proven ability in teaching university-level probability and statistics courses
- Strong technical writing skills as the first author of one of the journal's five most cited papers
- Proven non-technical writing ability as obtaining grants and first rank in fellowship application
- Proven oral presentation skills as winning the first place of 3-Minute Thesis competition

Collaboration

- Ability in collaborating with engineers (in industry) and engaging stakeholders (in research)
- Experience as effective leader and team player of multi-disciplinary and multi-cultural teams

Education | Training

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| Postdoctoral Fellowship, University of Saskatchewan, Saskatoon, Canada | 2018/01 - 2020/06 |
| Artificial Intelligence, Columbia University via EdX | 2020/02 - 2020/05 |
| Machine Learning, Stanford University via Coursera | 2018/10 - 2019/01 |
| Ph.D. Industrial Engineering, University of Washington, Seattle, USA | 2012/09 - 2016/08 |
| M.S. Industrial Engineering, University of Washington, Seattle, USA | 2009/09 - 2011/06 |
| B.Eng. Industrial Engineering, Chulalongkorn University, Bangkok, Thailand | 2004/06 - 2008/04 |

Work Experience | Volunteering

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| University of Saskatchewan, Saskatoon, Canada | 2018/01 - 2020/06 |
| Postdoctoral Researcher | |
| <ul style="list-style-type: none">• Initiated a project for exoskeleton trials on farms, i.e. developed research questions and protocols to measure workloads while farmers using exoskeleton• Conducted research, i.e. recruited participants, collected data, developed programs for Time Series Analysis, disseminated research findings in conferences and publications | |
| Universidad de las Américas Puebla, San Andrés Cholula, México | 2017/08 - 2017/12 |
| Visiting Lecturer | |
| <ul style="list-style-type: none">• Gave lectures and led activities for courses: Statistical Inference and Design of Experiment• Taught extracurricular workshops on 'Introduction to R programming language' | |

- Institute for Health Metrics and Evaluation**, Seattle, USA 2016/11 - 2017/07
Postdoctoral Researcher
- Applied **Bayesian statistical methods** to co-develop codes for predicting disease burden
- University of Washington**, Seattle, USA 2010/06 - 2016/09
Research Scientist
- Conducted field research on ergonomic risks in apple harvesting workers and bus drivers, using **accelerometers, heart rate monitors, electromyography and global positioning systems**
 - Developed computational methods to characterize ergonomic exposures from sensor data
- Foundation for International Understanding Through Students**, Seattle, USA 2010/01 - 2016/07
Lead Facilitator
- Facilitated activities for international individuals to participate in local community gatherings
 - Served as ambassador for participants of the Study in the U.S. Institute programs
 - Performed music and directed a musical ensemble in intercultural and outreach events
 - Shared Thai cultures to K-12 students in community outreach programs
- High Atlas Foundation**, Marrakesh, Morocco 2015/08 - 2015/09
Grant Writing Volunteer
- Assessed agricultural practice and water infrastructure in Amsouzert village
 - Interviewed villagers on their needs, concerns and ideas in social development
- Burn Design Lab**, Vashon Island, USA 2013/10 - 2014/06
Consultant
- Initiated ideas for improvement and provided iterative feedback on stove handle designs
- Haiti Communitere**, Port-au-Prince, Haiti 2013/03 - 2013/08
Field Implementation Volunteer
- Set up facilities that recycles polystyrene food containers into construction blocks
 - Built simulation models to redesign facilities and drafted drawings using SolidWorks
- University of Washington** (Study Abroad - Water in Arid Land), Irbid, Jordan 2012/08 - 2012/09
Student Webpage Assistant
- Maintained and updated study abroad webpage for exploration seminar
- Engineers Without Borders**, UW Chapter, Seattle, USA 2011/10 - 2012/06
Student Volunteer
- Performed tests for turbidity and energy consumption of drinking water treatment units
- University of Washington** (Libraries), Seattle, USA 2009/10 - 2011/06
Student Specialist
- Transliterated materials and provided consultations on Thai language to library catalogers
- Toyota Motor Asia Pacific - Eng & Mfg**, Samutprakarn, Thailand 2008/04 - 2009/07
Engineer
- Modified workflows to improve process of production and circulation of technical drawings
 - Provided troubleshooting on CATIA v5 and Toyota in-house information-sharing systems