

Titipat Achakulvisut

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| PERSONAL INFORMATION | Master Student Department of Biomedical Engineering Northwestern University 2145 Sheridan Road Evanston, IL 60208, USA | Nationality: Thai Date of Birth: 06 Apr 1990 Phone: (224) 999-3633 email: titipat.a@u.northwestern.edu |
| INTERESTS | Machine Learning, Signal Processing, Adaptive Filter, Optimization, Computational Neuroscience, Control System | |
| EDUCATION | Northwestern University , Evanston, IL, USA M.S., Biomedical Engineering | 2013 – present (GPA 3.94/4.0) |
| | Chulalongkorn University , Bangkok, Thailand B.Eng, Electrical Engineering <i>First Class Honor</i> | 2008 – 2012 (GPA 3.87/4.0) |
| | Suankularb Wittayalai School , Bangkok, Thailand Secondary School, Math & Science Program | 2003 – 2008 (GPA 3.98/4.0) |
| ACADEMIC EXPERIENCE | M.S. Research <i>Bayesian Behavior Laboratory</i> <i>Rehabilitation Institute of Chicago (RIC), Northwestern University</i> <i>Advisor: Konrad Kording</i> <i>Research: Inferring low-dimensional dynamics of neural population</i> | June 2014 – present |
| | Research Intern <i>AIM Laboratory, Department of Biomedical Engineering</i> <i>Mahidol University, Pathumthani, Thailand</i> | August 2012 – August 2013 |
| | Undergraduate Research/ Research Assistant <i>DSPRL Laboratory, Department of Electrical Engineering</i> <i>Chulalongkorn University, Bangkok, Thailand</i> <i>Advisor: Nisachon Tangsangiumvisai</i> <i>Research: Adaptive Filter and Noise Reduction Algorithm</i> | 2011 – 2012 |
| PROJECTS | Optimal Control of Thrust-Vectored Hovering Rocket <i>Simulation of projection based optimal control of non-linear system on Mathematica. This project is final project in a class Optimal Control of Nonlinear Systems class taught by Prof. Todd Murphey</i> | |
| | Lagrangian Mechanics of Trapezoidal Box with Movable Link <i>Simulation of dynamical system with many degrees of freedom including impact using Lagrangian mechanics method on Mathematica. This is a class final project in Theory of Machine Dynamics taught by Prof. Todd Murphey</i> | |
| | Framework for Brain Image Segmentation using modified Fuzzy C-Means Clustering Algorithm <i>Research Assistant Project under the supervision of Asso. Prof. Panrasee Ritthipravat at AIM Laboratory. This project is done with Zaw Htet Aung and Tulakarn Ruangrong extended from Intelligence Systems and Biomedical Signal Processing class project</i> | |

A Noise Reduction Technique for Hands-Free Telephony in a Car Environment

Senior Project at Digital Signal Processing Research Laboratory (DSPRL) under the supervision of Asso. Prof. Nisachon Tangsangiumvisai

M-Max LMS Adaptive Algorithm in Hands-Free Telephony

Additional Project at Digital Signal Processing Research Laboratory (DSPRL) under the supervision of Asso. Prof. Nisachon Tangsangiumvisai

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| NON-ACADEMIC POSITION | • Biomedical Engineering Graduate Student, Northwestern University | 2013 – present |
| | • Member of the Engineering Students Academic Club (ESAC) | 2008 – 2011 |
| | • Member of Engineering Light and Sound Club | 2008 – 2011 |
| | • Vice president of Buddhist Club | 2007 |
| | • Member of Suankularb Chorus Club | 2006 – 2007 |
| AWARDS & FELLOWSHIPS | • Royal Thai Government Scholarship, Ministry of Science and Technology | 2012 – present |
| | • IEEE Student Membership | 2011 – present |
| | • Outstanding Academic Performance in Engineering | 2008 – 2012 |
| | • Candidate of Ananda Mahidol Scholarship | 2012 |
| | • SCG Innovative Suggestion Award <i>Measure Lubricant Quality using Dielectric Constant</i> | 2011 |
| | • Highest Scores in Mathematics, ONET, National Institute of Education Testing Service, Thailand | 2008 |
| SELECTED EXTRACURRICULAR ACTIVITIES | • Summer School in Computational Sensory-Motor Neuroscience (CoSMo) | 2014 |
| | • Brain Fair <i>Volunteered with Northwestern University Brain Awareness Outreach (NUBAO) educating Chicago community about the brain</i> | 2014 |
| | • Chulalongkorn University Open House | 2012 |
| | • Volunteer in Flood Relief Project <i>Checked current leakage in flood damaged home, Electrical Engineering Flood Relief Project Used RFID to store data of refugee at Chulalongkorn University flood evacuation center</i> | 2011 |
| | • Head of Educational Parts, NECTEC Electronics Camp <i>Taught Basic Electronics and Circuit Theory with Laboratory Experiments to students</i> | 2010 |
| | • Member of Funfueng Camp <i>Tutored Mathematics and Natural Sciences to students in suburban provinces in Thailand</i> | 2008 – 2010 |
| | • Head of Freshmen Tutorial Project <i>Recruited Engineering students to review Calculus, Physics, Chemistry, and Basic Computer Programming to freshmen. (Being a member of this project from 2008 – 2012)</i> | 2009 |
| | • Staff of Chulalongkorn University Freshmen Orientation Camp | 2009 |
| | • Member of Fundamental Engineering Camp | 2008 |
| | • Physic Olympic Camp | 2006 – 2007 |

COMPUTER SKILLS

- **Programming and Scripting Languages:**

Python (Numpy, Scikit Learn, Pandas), MATLAB, *Mathematica*, L^AT_EX, R, C, Java, Adobe Illustrator, Microsoft Office, Emacs, Git

- **Developing** : HTML, CSS, JavaScript

- **Operating Systems:** Mac OSX, Windows

LANGUAGES

Thai (Native), English (Proficient)