

## EDUCATION

*University of California,  
Berkeley*

**B.S. in Mechanical Engineering  
Minor in Electrical Engineering  
and Computer Science**

GPA: 3.85

May 2021 | Berkeley, CA

## LINKS

Website: [thitikhomin.github.io](https://thitikhomin.github.io)

Portfolio: [tinyurl.com/thitikhomin](https://tinyurl.com/thitikhomin)

LinkedIn: [linkedin.com/in/thiti-khomin](https://linkedin.com/in/thiti-khomin)

Github: [github.com/thitikhomin](https://github.com/thitikhomin)

## TECHNICAL SKILLS

*Computer-Aided Design*

SolidWorks | AutoCAD

*Manufacturing*

Lathe | Mill | Laser Cut | CNC

*Programming*

MATLAB | Python | Swift |

HTML | C++

*Software*

Simulink | Finite Element

Analysis | Robot Operating

Systems (ROS) | Arduino

*Languages*

Thai (Fluent) | English (Fluent)

## COURSEWORK

-Mechatronics Design

-Dynamic Systems and Feedback

-Vehicle Dynamics and Control

-Manufacturing and Tolerancing

-Thermodynamics

-Solid Mechanics

-Three-Dimensional Modeling

-Programming for Engineers

-Internet of Things

-Designing Information Devices

## ENGINEERING EXPERIENCE

**SCG Chemicals Internship - Robotics Division** May 2019 - August 2019  
*Mechatronics Engineer*

*Design and implement features to optimize the Carburization-Inspection Robot (CiBot), a robot that measures carbon levels of coils in petrochemical plants*

- Led a team of engineering interns to mitigate random steering bias of the CiBot during its operation
- Designed mechanical actuating systems (SolidWorks) and implemented a PID controller through IMU feedback for self-stabilizing control (MATLAB and Arduino)
- Developed six design sprints, utilizing the agile methodology, to successfully upgrade the working product, reducing operating manpower by 40%

**Berkeley Formula Racing** January 2018 - Present  
*Brakes and Driver Interface Engineer*

*Design and manufacture a formula-style race car over the course of a year*

- Designed heel rests and pedals with minimal weight while maintaining function and performance with stress analysis (SolidWorks and FEA)
- Automated testing data to gather various rotor temperatures and hydraulic pressure during different braking events
- Simulated braking performances at different velocities utilizing knowledge of vehicle dynamics and heat transfer (MATLAB)

## PROJECTS AND RESEARCH

**Autonomous Skateboard** January 2019 - Present  
*Model Predictive Control Lab at UC Berkeley*

*Design and control an autonomous skateboard*

- Designed, prototyped, and manufactured a mechatronic system to be mounted on the skateboard for controllability and movement (SolidWorks)
- Program a PID controller to stabilize and control skateboard movement with Robot Operating Systems (ROS) through Python

**Automated Card Shuffler** January 2019 - May 2019  
*Mechatronics*

*Design a device with integrated mechanical and electrical systems*

- Prototyped, and manufactured a machine with the ability to split, shuffle, and distribute cards depending on user input (SolidWorks)
- Programmed microcontroller to control linear actuators, DC motors, and movement sensors (Arduino)

**Wind Turbine Project** August 2018 - December 2018  
*Three-Dimensional Modeling for Design*

*Prototype a miniaturized model of a wind turbine with efficient power generation*

- Integrated solid mechanics and aerodynamics to design a wind turbine blade and tower structure (SolidWorks)
  - 3D Printed and tested turbine on its power output and ability to withstand load
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