

JACK HAN

✉ jackhan@stanford.edu

🌐 [linkedin.com/in/jack-han/](https://www.linkedin.com/in/jack-han/)

☎ (650) 269-0857

📍 Stanford, CA 94305

EDUCATION

Stanford University - Stanford, CA

September 2019 – June 2021

M.S. Mechanical Engineering

- Courses: Smart Product Design, Control Design Techniques, Programming Abstractions

University of Toronto - Toronto, Canada

September 2014 – April 2019

B.ASc. Mechanical Engineering

- Minors: Robotics & Mechatronics, Bioengineering
- CGPA: 3.97/4.00, Summa Cum Laude
- Courses: Mechatronics Systems, Control Systems, Linear Algebra, Numerical Methods, Data-Based Modelling

SKILLS

Programming: C, C++, MATLAB, Arduino, LaTeX, Excel VBA, OpenCV

Applications: SolidWorks, ANSYS, Simulink, PSpice, Altium Designer, ImageJ, LabView, SciRun, Minitab

Hardware: 3D printing, machining, soldering, laser cutting, oscilloscope, multimeter

WORK EXPERIENCE

Research Engineer - Toronto, Canada

September 2018 – June 2019

Holland Bloorview Kids Rehabilitation Hospital

- Developed software for non-verbal children with cerebral palsy to interact with computers and devices
- Programmed algorithms to recognize facial gestures using machine learning (HMM) classifiers in MATLAB
- Built a prototypical system to classify 4 facial gestures with up to 99% accuracy
- Awarded the Centennial Senior Project Award (\$500), with a journal paper in preparation

Process Analyst - Toronto, Canada

May 2017 – April 2018

Canadian Imperial Bank of Commerce (CIBC)

- Drove business process management improvements impacting over 3 000 employees and 60 000 clients
- Created Excel VBA applications to track workflow time and model process costs
- Designed a new metrics dashboard to visualize process performance data and inform executives
- Managed changes to a major banking process to produce \$250 000 in annual cost savings for CIBC

PROJECT EXPERIENCE

Coconut Lathe - Toronto, Canada & Paranas, Philippines

August 2018 – April 2019

Engineering Capstone Project

- Built a coconut-peeling machine for farmers and small-scale factories in rural Philippines
- Designed and prototyped a 3-DOF cutting mechanism using SolidWorks and machine shop tools
- Improved the previously strenuous peeling process by reducing manual effort by 76%
- Awarded 1st Place in the Mechanical Engineering Capstone Showcase (\$1 000)

Automated 3D Human Nerve Reconstruction – Toronto, Canada

May 2018 – August 2018

Adaptive Neurorehabilitation Systems Lab, Toronto Rehabilitation Institute

- Developed a software pipeline to automate the finite element model (FEM) construction of nerves
- Processed histology images and created 3D reconstructions using MATLAB, ImageJ, and SciRun
- Reduced a previously manual workflow from 5 days to 2 minutes to complete per data set