

MINSI SUNG

Software Engineer with 4 Years Experience on CAD/CAM and Computer Graphics Software Development

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EXPERIENCE

R&D Engineer II

ECAD Team, Ansys

 Jun 2021 – Present  Vancouver, Canada

- Deliver robust software design and implementation in ECAD team focusing on GUI design using **MFC** and on meshing algorithm in Ansys Electronics Desktop (AEDT).
- Perform products bug verification, maintenance, release testing and documentation.

Software Engineer Intern

Lumerical, Ansys

 Feb 2021 – May 2021  Vancouver, Canada

- Enabled the layer builder module to use the optimized geometries by converting 3D primitives outputs from the inverse design module to 2D polygons using **Parasolid**.
- Involved in the agile development, bug verification and maintenance of products.

Research Assistant

CAD/CAM Lab, University of British Columbia

 Sept 2018 – Jan 2021  Vancouver, Canada

- Built a user-friendly automatic components grouping system to generate kinematic chains of multi-axis machine tools for machining simulation in C++ using **Qt**.
- Constructed a collision detection algorithm using voxel modeling that increases efficiency by 20% for grouping validation of different machine tool configurations.
- Developed an environment to read STL files and kinematic chains in URDF of machine tools and utilize **OpenGL** to simulate machine movements.

Intern

Industrial Technology Research Institute (ITRI)

 July 2018 – August 2018  Nantou, Taiwan

- Constructed an identification algorithm for the quality of machining path from CAM by calculating feedrate limits and by anticipating acceleration configurations.
- Created Matlab visualization on normal errors between position command and position feedback on the machining surface for easier observation.


PROJECTS

Construct Transfer Learning Model for COVID-19 classifier (Final project of CPSC 340 Machine Learning and Data Mining)

 Jan 2020 – Apr 2020

- Used **Pytorch** to Implement transfer learning for constructing multi-class classifiers to classify chest X-ray images into three classes; COVID-19, Pneumonia, and Normal.
- Got 90% average classification accuracy using VGG16 with fine-tuning the last layer.

Remesher with Four Processes for Large Triangular Mesh Models (Final project of CPSC 524 Computer Graphics: Modelling)

 Feb 2019 – Jun 2019

- Completed the remesh process with a user friendly API in C++ by iterating through geometry models for mesh refinement, edge collapse, edge flipping and smoothing.

SKILLS

Programming Languages

C++, C#, Python, Matlab, Java, HTML, CSS, Javascript

Tools

MFC, Qt, OpenGL, Parasolid, Jira, Git, AEDT, Solidworks

LEADERSHIP

President

Taiwanese Graduate Student Association in Vancouver

 Feb 2020 – Feb 2021

 Vancouver, Canada

Captain

Baseball Team in Mechanical Engineering Department

 July 2016 – July 2017

 Tainan, Taiwan

HOBBIES

Baseball

Photography

Cycling

LANGUAGES

Mandarin(Native) ● ● ● ●
English ● ● ● ●
Korean ● ● ● ●

EDUCATION

MASc in Mechanical Engineering

University of British Columbia, Canada

 Sept 2018 – Jan 2021

BEng in Mechanical Engineering

National Cheng Kung University

 Sept 2013 – Jan 2018