MINSI SUNG

Software Engineer with 4 Years Experience on CADCAM 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.

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