Gurshan Deol

Mechanical Engineer | Gurshan.me
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EDUCATION

UNIVERSITY OF WATERLOO
BASc in Mechanical Engineering
April 2019 | Waterloo, ON
Option in Engineering Biomechanics

LINKS

LinkedIn:// gurshandeol
GrabCAD:// gurshan.deol-1
Github:// shawn-deol
Devpost:// gurshan

SKILLS

DESIGN
SolidWorks • NX • Fusion 360
AutoCAD • Inventor • OpenSCAD

MANUFACTURING
Tolerance Analysis • DFM/DFA/DoE
Machining • Rapid prototyping

SOFTWARE
MATLAB • LabVIEW • Python
C++ • GCODE • SQL • JMP

ANALYSIS
ANSYS • SolidWorks Simulation
Adams

HARDWARE
Arduino • NI Hardware • Raspberry Pi

AWARDS

HACK THE NORTH 2016
$ 400 PagerDuty sponsor prize for best use of pagerduty API

HACKADAY PRIZE 2016
$ 1000 prize for exoskeleton grip enhancement device

DELTAHACKS 2015
$ 100 Sponsor prize for best use of Estimote Bluetooth Beacons

EXPERIENCE

APPLE | Product Design Validation
Mar 2017 - Aug 2018 | Cupertino, CA

- Designed mechatronic fixtures to evaluate performance of different systems such as tribology (wear and friction), load distribution and fatigue
- Wrote Python, JMP & MATLAB scripts for data processing and visualization
- Developed and conducted experiments to investigate haptic user experience
- Generated data driven results in JMP to influence early design decisions

APPLE | Product Design Architecture
Aug 2017 - Mar 2017 | Cupertino, CA

- Designed early prototypes for future Mac products in NX
- Investigated feasibility of concepts with functional prototypes and simulation
- Worked on mechanical systems such as hinges, fasteners and enclosures

FORMLABS | Mechanical Design - Special Projects
Jan - April 2017 | Somerville, MA

- Designed prototype 3D printing accesories in SolidWorks
- Conducted material compatibility testing, tolerance analysis, concept generation, prototyping, component sourcing, testing & validation
- Wrote python scripts to improve an experimental print process

VOXEL8 | Hardware Design
May - Aug 2016 | Somerville, MA

- Developed manufacturing and assembly processes for printer components
- Designed and conducted tests to validate pneumatic subsystems using python
- Created pneumatic systems for nozzle cleaning and material deposition

OPHARDT HYGIENE | RD Engineering Student
Sep - Dec 2015 | Beamsville, ON

- Designed plastic and sheet metal fixtures in SolidWorks
- Designed and Implemented a liquid level measuring system using Arduino
- Developed performance & efficiency tests for DC motors

PROJECTS

HANDHELD GAMING DEVICE
- Created a portable gaming console powered by a Raspberry Pi
- Designed the enclosure and 12 button input system

3D PRINTED HUMAN INPUT DEVICE
- Designed a Human Input Device using the Voxel8 printer
- Device relies on compliant flexures and printed silver contacts

URC ARM DESIGN
- Redesigned the 2018 UW Robotics rover arm ground up