Sang Kim

(770) 375-6560 | sang.kim@nyu.edu | cryptokn1ght.github.io | US Citizen

Education

New York University *New York, NY*

B.S. Mechanical Engineering, GPA: 3.23/4.0, Dean's List (2018-2020) *Aug 2016 - May 2020*

- **Organizations**: Othmer Hall Council, American Society of Mechanical Engineers, Society of Asian Scientists and Engineers

Experience

WOOMBA (Dr. Morris Young Outstanding Project Design Award Recipient) *New York, NY*

Design Engineer *Aug 2019 - PRESENT*

- Designed structural components and mechanisms of remotely operated aquatic vehicle (ROAV) in SolidWorks while working with machinist to consider manufacturing methods and restrictions
- Reduced empty weight by 25% by performing static structural analyses of loading components in ANSYS Workbench to meet project specifications
- Optimized framework design layout to lower center of gravity by 6 inches and increase surface area for interfaces and attachments by over 100%
- Developed technical drawings of ROAV components with GD&T for manufacturing (waterjet cutting)

MakerBot Industries *New York, NY*

Materials and Test Engineering Intern *Sep 2019 - Dec 2019*

- Developed portfolio of specialized material testing data using R studio utilized in print tuning for advancing industrial prototyping capabilities
- Integrated automated LabVIEW program with testing hardware (PID, force gauges, encoders, data acquisition system) to accelerate material testing
- Performed print tuning with Tough PLA using json files to develop optimal settings for dimensional accuracy, print quality, and extruder performance consistency

NYU Dibner IT Innovation Team *New York, NY*

Specialized Design Lead *Nov 2018 - Apr 2020*

- Designed & implemented housing units for Ultrasonic sensors & Raspberry Pi's(RPI) utilized in human detection to predict vacancy of over 500 seats
- Utilized large scale additive manufacturing processes to rapidly accelerate the prototyping phase for hardware testing
- Increased manufacturing volume by 50% by performing design analyses in CatalystEX & Netfabb to optimize 3D printing quality and part size
- Implemented security mechanisms in RPI cases to prevent tampering/theft of over $1000 of hardware
- Designed and 3D printed components for the Apollo Project while working with Arduinos, PCBs, stepper motors, and servo motors in NYU Library

NYU Aerospace - SAE Aero Advanced Class *New York, NY*

Mechanical Design Engineer and Manufacturing Lead *Oct 2018 - Apr 2019*

- Designed & constructed empennage/tail & wings of aircraft with mechanical fastening features for disassembly while maintaining stable flight
- Redesigned wing box and fuselage components to increase dynamic and static structural stability while reducing weight by 30%
- Performed failure analysis using machine design calculations to optimally decrease rear landing gear weight by over 50%
- Conducted airfoil analysis of primary aircraft to maximize Cl/Cd ratio while minimizing stress concentration from spar contact and hole placement
- Developed technical drawings of aircraft compliant with SAE Aero competition standards

RePrint Bot *New York, NY*

Design Engineer *Aug 2018 - Dec 2018*

- Designed parts and an assembly for an extruder using a bottom-up design approach with the use of SolidWorks
- Protoyped an extruder using off-the-shelf and recycled parts as the first stage of manufacturing and product testing
- Managed parts inventory and updated existing SolidWorks models according to existing parts and materials

Other Projects

- The Apollo Project: ISS and Hubble Telescope Model, Advanced CAD: R2D2, BDI/AEM Manufacturing Analysis of Pepper Mill, 3D Printed Robotic Crane Arm

Skills

Software	SolidWorks, KeyShot8, ANSYS Workbench
Languages & Frameworks	RStudio, MATLAB, Python, LabVIEW, HTML/CSS, JavaScipt, Bootstrap
Processes	DFA/DFM, GD&T, Injection Molding, Blow Molding, Waterjet Cutting, Laser Cutting, 3D Printing, CNC Machining Rapid Prototyping, Hardware/Product Testing
Misc. Technologies	Mac, Windows, BASH, Git, Adobe Creative Suite, Microsoft Office, Raspberry Pi, Arduino