Sang Kim

New York, NY

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Education

New York University

New York, NY

B.S. Mechanical Engineering, GPA: 3.27/4.0, 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 - May 2020*

- Designed the framework and mechanical components of a payload carrying electric powered aquatic vehicle tasked with removing surface pollution with the use of SolidWorks
- Conducted design review meetings to validate design specifications, discuss manufacturing methods, and resolve issues
- Reduced empty weight of frame through static structural analysis by over 25% using ANSYS Workbench & SolidWorks Simulations
- Optimized framework design to improve dynamic stability by 70% and surface area for interfaces/attachments by over 100%
- Developed 2D drawings and Bill of Materials to document purchased parts and validate manufacturing methods with machinist

MakerBot Industries

New York, NY

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

- Integrated LabVIEW program with testing apparatus, various sensors, & a data acquisition box to automate material testing
- Processed, analyzed, and documented material testing data for over 20 3D printing materials using R Studio and Microsoft Excel
- Optimized print settings for Tough PLA using analyzed testing data to decrease print time by 10% while maximizing dimensional accuracy and print quality
- Documented testing of extruders with different thermal cores and thermal casings to refine extruder performance

NYU Dibner IT (Division of Libraries Dean's Award)

New York, NY

Specialized Design Lead *Nov 2018 - Apr 2020*

- Lead the design and implementation of technological enhancements to the library with innovative solutions
- Designed & installed housing units for Ultrasonic sensors utilized in human detection to predict occupancy of over 500 seats
- Increased manufacturing volume of housing units by 50% by performing design analyses in CatalystEX & Netfabb
- Collaborated with hardware engineers in designing Raspberry Pi cases to prevent tampering/theft of over $1000 of hardware
- Drafted floor plans with electrical schematic and sensor marks to ensure safety compliance using SolidWorks and AutoCAD
- Designed 3D printed parts for an 'Apollo Mission' display powered by stepper motors and Arduino using SolidWorks

NYU Aerospace - SAE Aero Advanced Class

New York, NY

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

- Redesigned wing box and payload carrying fuselage after failed test flight to increase structural strength while reducing weight by 30% using SolidWorks Simulations
- Reduced stress concentration on center wing box by 60% through static structural analysis using SolidWorks Simulations
- Designed removable carbon fiber boom twin-tail of primary aircraft for easier manufacturing and improved control during flight
- Decreased rear landing gear weight by over 50% using ANSYS Workbench & machine design calculations, improving static stability

Additional Projects

- The Apollo Project, Advanced CAD: R2D2, BDI/AEM Manufacturing Analysis of Pepper Mill, RePrint Bot, 3D Printed Robotic Crane Arm

Skills

Software	SolidWorks, AutoCAD, CATIA v5, KeyShot8, ANSYS Workbench
Processes	DFA/DFM, 2D Drafting/Drawing, GD&T, 3D Printing, Rapid Prototyping (Machining, Laser Cutting, Waterjet), Finite Element Analysis, Design Calculation, Iterative Design, Design Conceptualization, Strategic Planning
Languages	RStudio, MATLAB, Python, LabVIEW, HTML/CSS, JavaScipt, Bootstrap
Misc. Tech.	Mac, Windows, BASH, Git, Adobe Creative Suite, Microsoft Office, Raspberry Pi, Arduino