

# Francis Gold Sy

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## EDUCATION

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**City University of New York, City College**

**Expected Grad:** *June 2022*

Major: B.E., Mechanical Engineering; Minor: Computer Science

*GPA: 3.86*

*S Jay Levy Fellow:* a year-long professional development experience culminating in a summer internship

## PROFESSIONAL SKILLS

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Software: SolidWorks, Autodesk Fusion 360, MATLAB, Arduino, Java, Python, Microsoft Office

Manufacturing: FDM & SLA 3D Printers, Laser Cutter, Prototyping, Design for Manufacturing

## EXPERIENCE

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**The City College of New York**

*Oct 2020 – Present*

***Undergraduate Research Assistant***

- Simulating different configurations of an actuated foldable robot using MATLAB Simulink and Gazebo ROS
- Experimenting with Robotics System Toolbox and Simulink to construct and control joints
- Working in a team of two under Dr. Su and Dr. Di Lallo at the Biomechatronics and Intelligent Robotics Lab

**WearWorks Inc, NYC**

*June 2020 – Aug 2020*

***Mechanical Engineering Intern***

- Collaborated in a team of three to design, iterate, and prototype a haptic smartwatch for manufacturing
- Reduced manufacturing costs by integrating design feedback from injection molding companies; conducted plastics and stress simulations in SolidWorks to optimize product for manufacturing
- Managed DFMEA, PFMEA, process flow chart, and other manufacturing-related documents
- Identified and communicated with promising U.S. and overseas suppliers for B.O.M. needs
- Ideated and modeled different versions of packaging for company product

**Zahn Innovation Center, CCNY**

*Feb 2019 – May 2020*

***Engineering Apprentice***

- Using SolidWorks, Fusion 360, 3D printers, and laser cutter for various projects and design applications
- Executed design of various client-requested products through small team collaboration
- Experienced in the use and maintenance of FDM and SLA 3D printers
- Designed, iterated, and delivered a multi-accessory K-8 mathematical learning apparatus to an outside client

**WearWorks Inc, NYC**

*Jan 2020 – Feb 2020*

***Product Engineering Intern***

- Lead development and production of the WayBand for showcasing events and product launch
- Soldered, assembled, and applied finishing techniques for WayBand production
- Operated and maintained the Form 2 to lead product iterations and development

**DogSpot Inc, NYC**

*June 2019 – Aug 2019*

***Engineering Intern***

- Supported circuit board production through wire prep, soldering, and board assembly
- Managed circuit board materials and maintained hardware inventory
- Streamlined circuit board production through documentation of assembly and troubleshooting processes
- Maintained strong communication with assembly team to ensure deadline completion and smooth workflow

## PROJECTS

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**Customized PCB Keychains**

*August 2019*

- Used Autodesk Fusion 360 to create a two-part keychain casing using a snap-fit mechanism; included company logo on front and font-customized names on the back
- Soldered LEDs, wires, battery mount, and button onto circuit boards; installed boards into 3D printed casing

## ACCOMPLISHMENTS

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- March 2019: Mark Zemansky Introductory Physics Prize Winner
- January 2018: FIRST Tech Challenge Inspire Award recipient