

Andrew Kim

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Education:	THE COOPER UNION FOR THE ADVANCEMENT OF SCIENCE AND ART , New York, NY Bachelor of Engineering, Chemical Engineering , Minor in Computer Science , Projected May 2022 Cumulative G.P.A. 3.8/4.0 Dean's List, Spring 2019 Innovator's Scholarship and Half-Tuition Scholarship, 2017-2022	
Project Work:	Alternative BECCS Process Research , The Cooper Union	Summer 2019 to Present
	<ul style="list-style-type: none">- Researched and tested the viability of an alternative Bio Energy Carbon Capture and Storage process- Conducted pyrolysis and thermogravimetric analysis on common biowaste such as walnut shells to test the viability of using pyrolysis, gasification, and a solid oxide fuel cell to generate electricity in a carbon negative process- Redesigned the procedure for pyrolysis and installed the new equipment for pyrolysis testing- Procured and filtered the pyrolyzed biochar for testing in the thermogravimetric analysis instrument- Reviewed literature to understand the factors that affect biochar yield including heating rate, cooling rate, biomass composition, and pyrolysis atmosphere	
	DAN the FAN , Invention Factory at the Cooper Union	Summer 2019
	<ul style="list-style-type: none">- Used SolidWorks to design DAN, a device that saves thousands of kilowatts in air conditioning and heating by improving air circulation within a home- Built a full-scale model out of wood using a CNC machine, conducted fluid dynamics simulations using ANSYS Fluent, COMSOL, and experimented in a real home to prove DAN's functionality- Completed a provisional patent application for the invention; the invention is Patent Pending- Professor's Favorite Invention award.	
	akakimmykim.githb.io	Summer 2019 to Present
	<ul style="list-style-type: none">- Launched flexible personal website with designs that adapts to mobile and desktop- Utilized ReactJS as the framework, designed the layout using CSS and HTML, and added functionality using JavaScript	
Experience:	Dalat International School Chemistry Lab & Sound Engineering Intern , Malaysia	2017-2018
Skills:	<ul style="list-style-type: none">- Organized and set up materials and chemicals for experimentation and research- Calibrated chemistry experiment procedures for high humidity environments and limited chemicals- Installed audio equipment and managed sound quality for school events for celebrations, performances, and conferences- Taught chemistry, biology, and algebra in place of absent teachers and struggling students	
	Computer Programs: Python, C++, CSS, HTML, JavaScript, C, Microsoft Excel, Microsoft Word, SPARTAN 18', ANSYS Fluent, AutoCAD, SolidWorks, ReactJS, MATLAB, Arduino	
	Languages: Fluent in Korean and English. Conversant in Mandarin	
Memberships:	Laboratory Equipment: Spectrometry, Tube Furnace with gas isolation, Thermogravimetric Analysis, Gas Chromatography, Thermocouple calibration and rewiring.	
	Documentation: Patent Writing	
	Chemistry Tutor, Cooper Union Chemistry Department	9/19 - Present
	Peer Mentor, Cooper Union Student Affairs	8/19 - Present
	Treasurer, The Association of Energy Engineers	12/19 - Present
	Sophomore Representative, The Chemists' Club	12/19 - Present