CURRICULUM VITAE

Website: https://ckong6953.github.io/
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EDUCATION

BS University of North Carolina – Chapel Hill, May 2022
Chemistry (Biochemistry Track)
BA in Computer Science
Minor in Neuroscience
Cumulative GPA: 3.829

HONORS AND AWARDS

Carolina Research Scholars Program Spring 2022
- Met requirements, awaiting approval for next semester

Jason D. Altom Memorial Award Fall 2021
- Designated award of $750.00 in recognition of research potential

UNC Chemistry Department "Say Yes" Fund Award Summer 2021
- Designated stipend of $4,000 to support winners with advancing their research over the summer

Phi Beta Kappa Spring 2021

Ronald E. McNair Scholar Spring 2021
- Federal program meant to prepare underrepresented minority students for doctoral studies

Computer Science Enhancement Grant Spring 2020, Spring 2019
- Yearly amount of $300 awarded to help those considering computer science as a field of discipline

Dean's List* Fall 2018, Spring 2019, Fall 2019
- Recognizes full-time students who have obtained a semester grade point average of at least 3.500;
- *Suspended for later years due to COVID-19

RESEARCH EXPERIENCE

Research Assistant, In-person Summer 2021 – 2022
Lawrence Research Group

- Characterized human red blood cells as potential vehicles for drug delivery in the realm of protein therapeutics
- Loaded peptides internally and externally to determine therapeutic delivery potential
- Gained experience with LC-MS, ELISA assays, and hemocytometer

Research Assistant, Virtual Fall 2020 – Summer 2021
Lawrence Research Group

- Developed a virtual reality simulation to teach incoming graduate students about laboratory safety in the Unity Engine
- Assessed overall experience of the simulation
- Developed study needed to collect responses from participants

Student, Chemistry Lab Spring 2020
Maribel Borger

- Synthesized pyrylium salt derivatives from chalcones as potential organic photocatalysts
- Part of the Course-based Undergraduate Research Experiences (CUREs) initiative to help engage students in class-based research

Non-Mentored Research, Spring Valley High School Fall 2016 – Summer 2017

- Examined the usage of zeolites in water purification systems.
- Nominated for presentation at American Association for the Advancement of Science (AAAS) 2016 Conference

PROFESSIONAL EXPERIENCE

Student Assistant
Special Collections, Louis Round Wilson Library, Spring 2020 – Summer 2020

- Developed database skills for organization and retrieval of items through Microsoft Access
- Assisted patrons with retrieval of materials

TEACHING EXPERIENCE

Lead Student Course Advisor, Chapel Hill, NC Spring 2022

- Developed and advised introductory cellular agriculture course at UNC; sponsored by the Good Food Institute (GFI)
- Worked closely with many academic and industry professionals and created materials for students to utilize

Fall 2019 – Spring 2020

Habitat for Humanity Tutor, Chapel Hill, NC
Volunteer Tutor

- Helped children of families involved in the Habitat for Humanity Program in Orange County with classwork

SAT Tutor, Columbia, SC Summer 2020, Summer 2019
Private Tutor

- Taught students quantitative and verbal skills needed to achieve competitive scores on the SAT

PUBLICATIONS

Kong, C. I., Welfare, J. G., Shenouda, H., Sanchez-Felix, O. R., Floyd Jr., J. B., Hubal, R. C., Heneghan, J. S., & Lawrence, D. S. "Virtually Bridging the Safety Gap between the Lecture Hall and the Research Laboratory," J. Chem. Educ, April 2022.

Kong, C. I. "The Effect of Zeolites on Percent Transmittance of Lead Contaminated Water," South Carolina Junior Academy of Science (Furman University Scholar Exchange), March 2017.

Kong, C. I. "The Effect of Zeolite-Gravel Mixtures on The Concentration Of Leachate," South Carolina Junior Academy of Science (Furman University Scholar Exchange), April 2016.

PRESENTATIONS AND INVITED LECTURES

Poster Presentation, "Stability Assessment of Loading Tissue Plasminogen Activator into Human Red Blood Cells for Protein Therapeutics," Summer Undergraduate Pipeline Symposium, July 27, 2021.

Oral and Poster Presentation, "Stability Assessment of Loading Tissue Plasminogen Activator into Human Red Blood Cells for Protein Therapeutics," University at Buffalo Undergraduate Research Conference, July 22, 2021.

LEADERSHIP/ORGANIZATIONS

Member Spring 2021 – Summer 2022
Phi Sigma Pi National Honor Fraternity

Co-Director of Technology Fall 2020 – Spring 2022
The Chapel Hill Alt. Protein Project

- Communicating with various professors in the Triangle in stimulating a hub for alternative protein research
- Working with those involved in various industries to create a hub for alternative protein
- Planned curriculum for special topics course that will be available at UNC starting Spring 2021; listed as BIOL 290

Programming Team Executive Fall 2019 – Fall 2021
First Generation Student Association

- Accommodating first generation students at UNC Chapel Hill
- Planning of events that would help promote inclusion and raise awareness for first generation students

Funding Committee Co-Leader Fall 2019 – Spring 2022
UNC-CH Habitat for Humanity

- Volunteered at various build sites to build affordable housing
- Collaborated with business and other organizations to raise money necessary for continued operation
- Raised a total of $2,518 for the year of 2019-2020

RELEVANT COURSEWORK

Biochemistry
♦ General Chemistry ♦ Principles of Biology ♦ Analytical Methods
♦ Organic Chemistry I & II ♦ Inorganic Chemistry ♦ Molecular Biology and Genetics
♦ Introductory Biochemistry ♦ Fundamentals of Human Anatomy and Physiology
♦ Cellular and Developmental Biology ♦ Macromolecular Structure and Metabolism
♦ Undergraduate Chemistry Research ♦ Physical Chemistry I & II
♦ Metabolic Chemistry and Cellular Regulatory Networks

Computer Science
♦ Foundations of Programming ♦ Data Structures ♦ Computer Organization
♦ Modern Web Programming ♦ Models of Language and Computation
♦ Operating Systems ♦ Data Science Basics ♦ Programming Language Concepts
♦ Bioalgorithms

Other
♦ Multivariable Calculus I ♦ Mechanics and Relativity ♦ Modes of Inquiry
♦ Differential Equations I ♦ Electromagnetism and Quantum Mechanics
♦ Discrete Mathematics ♦ Principles of Statistical Inference ♦ Introduction to Neuroscience

COMPUTER SKILLS

GitHub: https://github.com/ckong6953

Programming: JavaScript/ES6 (Intermediate), Java (Intermediate), Python (Intermediate), R (Intermediate), C (Advanced), HTML/CSS (Advanced), MIPS Assembly (Advanced), C++ (Novice), MATLAB (Novice)

Applications: Eclipse IDE, Arduino IDE, Microsoft Access, Microsoft Excel, Microsoft Visual Studio Code 2016 IDE, Unity Engine

Noteworthy Projects: 2048, Data Structures/Algorithms, Hemocytometer Counting, Rhythm Game,

Platforms: Windows and Linux operating systems

LANGUAGES

English: Native Language

Korean: Intermediate Listener, Advanced Speaker, Advanced Reading and Writing

Latin: Basic Reading and Writing

OTHER

Interests/Hobbies

- 3D Printing
- Folding@home
- Application-Based Electronics (i.e., Raspberry Pi, Arduino, etc.)
- Photography