Nicholas Le Djedjos
Carman Hall, 545 W 114th St, New York, NY 10027
(601)-955-8308, nld2129@columbia.edu, LinkedIn

EDUCATION

Columbia University, School for Engineering and Applied Sciences, New York, NY — May 2026
Bachelor's of Science, Computer Science, Biomedical Engineering Minor — GPA 3.9/4.0
Mississippi School for Math and Science (MSMS), Columbus, Mississippi (MS) — May 2022
Inducted to Hall of Fame — GPA 4.0/4.0

SELECTED COURSEWORK

Columbia University
Introduction to Java, Java Labs, Emerging Scholars, Data Structures in Java, Multivariable Calculus for Engineers, Discrete Math, Advanced Programming (Spring), Computer Science Theory (Spring)
MSMS
Linear Algebra, Differential Equations, AP Calculus BC, AP Chemistry, AP Biology, Organic Chemistry

HONORS AND GRANTS

National Junior Science and Humanities Symposium Oral Presenter (April 2022)
International Science and Engineering Fair Finalist: Fully sponsored research experience (May 2022)
Jack Kent Cooke Scholar: 55k a year for four years of university

RESEARCH EXPERIENCE

Columbia University, Biology Department

Summer Undergraduate Research Fellow, Laboratory Member, Feb. 2023–now
Advisors: Dr. Saeed Tavazoie, Dr. Panos Oikonomou, Dr. Balaji Santhanam
Identifying drug repurposing candidates and biologically coherent sets of cancer genes using clustering and other statistical techniques on the LINCS1000 dataset. Testing if groups of genes significantly stratify patient survival using mutual information and Kaplan-Meier Survival Curves. Using Python (pandas, numpy sklearn) and GitHub to organize progress.

iResearch Institute

Research Intern, Virtual, Jun–Jul. 2021
Advisor: Prathamesh Chati, Washington University, St. Louis
Created the Essential Tremor biomarker study idea due to familial ties, bioinformatics focus, and underresearched topic. Navigated National Center for Biotechnology Institute Gene Expression Omnibus (NCBI GEO) data repository to locate RNA-seq samples. Used the R programming language to run Differential Gene Expression and Gene Set Enrichment Analysis. Used Jupyter Lab to run machine learning models (Random Forest and Logistic Regression). Created presentation and wrote 11 page paper detailing results and methods.

University of Mississippi, Synthetic Inorganic Chemistry Department

Rebel Research Fellow, May–Jun. 2021
Advisors: Dr. Jonah Jurrs, Zane Turner
Developed Copper I Redox shuttle for dye sensitized solar cells. Read scientific papers and offered solutions to optimize procedures. Utilized SigmaAldrich to calculate proportions of reactants. Used Schlenk line techniques to degas intermediate products. Worked with air-sensitive reactions in the glove box. Operated the NMR spectrometer and read the peaks to determine purity. Gave weekly update

presentations on lab progress to the lab group. Ran column chromatographies and used rotary evaporator to purify products. Read cyclic voltammograms. Learned to safely wash laboratory equipment with acetone and water.

PRESENTATIONS

National Junior Science and Humanities Symposium (NJSHS), Alburquerque, New Mexico, April 2022, Djedjos, N. "Identifying Genetic Biomarkers for Essential Tremor Diagnosis", fully sponsored by Department of Defense (lecture). Abstract has been published in NJSHS journal 2022.

International Science and Engineering Fair (ISEF), Atlanta, Georgia, 2022, Djedjos, N. "Identifying Genetic Biomarkers for Essential Tremor Using Bioinformatics and Machine Learning", fully sponsored by MSEF Region II (poster). Abstract has been published in ISEF journal 2022.

Mississippi School for Mathematics and Science, Columbus, Mississippi, May 2022, Djedjos, N. "Identifying Essential Tremor Biomarkers" (poster). Abstract has been published in MSMS Science Journal 2022.

LEADERSHIP/EXTRACURRICULARS

Synthetic Biology Initiative, Columbia University
Co-Expo Chair Lead (Aug. 2022-present)
Organizing research talks from chemical engineering to computational biology professors from around NYC at Columbia University.

Columbia Science Review, Columbia University
Writer (Aug. 2022-present)
Write short articles on exciting science and math topics in an informative and coherent way. Writing about astrobiology, personalized medicine, and genomics. Published in Spring 2023 Journal.

Lee's Martial Arts Academy, Brandon, Mississippi
Kukkiwon Certified Taekwondo Instructor (Aug. 2017-Aug. 2022)
Taught over 200 students kicking, blocks, forms, and self defense techniques, motivated students K-12 students with a positive attitude, regularly led one hour classes with 20-25 students.

TECHNICAL SKILLS

Computational: Python, Java, R, sci-kit learn, pandas (Random Forest and Logistic Regression), Differential Gene Expression with DEseq2, Gene Set Enrichment Analysis with gsea.
Wet Laboratory: Column and paper chromatography, operating NMR, titrations, rotary evaporator for purifying products.