✉ nsl2126@columbia.edu
🌐 nlin0907.github.io
📞 (678) 409-7696
in nicolelin2
⬛ nlin0907

NICOLE LIN:

Seeking to leverage technology for social impact with a focus on collaboration, communication, and creativity. Interests in open water swimming, traveling, and reading about start-ups and their journey.

Coursework

ENGI1006 Python for Engineers
MATH1554 Linear Algebra
MATH2551 Multivariable Calculus
COMS3134 Data Structures in Java
COMS3157 Advanced Programming

Skills

Python
Java
R
JavaScript
HTML/CSS
mySQL
NumPy
R
Conifer
Galaxy
UNIX
illumina
AFM

Select Projects

ML Wine Classifier: a machine learning classifier that can predict whether a Portuguese (Vinho Verde) wine is red or white from the chemical measurements

Shortest Path Visualizer: an easy-to-use visualizer implementing Dijkstra's algorithm to find shortest paths and Euclidean distances between pairs of major cities in the US and Canada on a map.

Profit Calculators: profit calculators for major eCommerce sites such as Amazon, eBay, and Poshmark

Personal Website:
a personal portfolio website with demos/code of my other projects

Where to Eat?: a data-intensive web application and multimodal ML pipeline that identifies locations of closest restaurants/fast food joints based on a group's preference

Education

Columbia University in the City of New York

Bachelor of Science, Computer Science, Sep 2020 – May 2024

GPA: 4.11, School of Engineering and Applied Science
Activities: Engineers without Borders, SWE, Girls Who Code, Red Cross

Employment

Columbia University Medical Center, NYC, NY   09/2020 – Present
Data Analyst
- Identify genetic factors involved in various forms of hereditary diseases, including neurodevelopmental disorders, hearing loss, and skeletal disorders
- Track molecular causes by integrating various technologies, including genomics, transcriptomics, and epigenomics
- Developed database objects, including tables, views and materialized views using SQL.
- Technologies: Python, R, JupyterNotebook, Conifer, Galaxy, Docker, Git, Bash

Georgia Tech Research Institute, Atlanta, GA   05/2019 – 08/2019
Paid Research Intern
- Developed, prototyped and tested quality, performance and compliance of different components and systems.
- Synthesized lead selenide quantum dots and aerosol jet-printed infrared displays
- *Publication*: A Robust Cation-Exchange Route to Stable Infrared-Emitting Chemical-Composition-Gradient Quantum Dots, Nanoscale

Northern Illinois University, DeKalb, IL   01/2019 – 08/2019
Research Intern
- Performed anodization of titanium leading to TiO_2 for biomedical applications not limited to bone regeneration
- Learned the deposition of iron on the surface of TiO_2 nanotubes
- *Publication*: Surface Treatment of Titanium by Anodization and Iron Deposition; Mechanical and Biological Properties, Journal of Materials Research

myGenomics, Atlanta, GA   08/2018 – 05/2019
Bioinformatics Software Intern
- Analyzed the hereditary risk for the development of cancers and diseases such as Parkinson's, Alzheimer's, and Hypocholesterolemia through manipulating and managing data with R, Python, and UNIX tools
- Maintained database of patient information through mySQL (database management software), constructed entity relationship diagrams (ER Diagrams), and queried relational databases
- Detected mutations through DNA sequencing and fragment analysis with illumina
- Manage large dataset collections including analytical results and data quality
- Interpreted results of routine tests of DNA extraction

Rutgers University, Newark, NJ   08/2018 – 01/2019
Research Intern
- Researched the 3D topography, mechanical properties, adhesion, chemical informations by functionalizing probe tip, electrical conductivity, thermal conductivity, electrostatic forces, and magnetic forces of different materials
- Performed Atomic Force Microscopy measurements on a soft Polydimethylsiloxane (PDMS) sample and a PDMS-epoxy sample to acquire their nanomechanical properties
- *Publication*: Rapid Broadband Discrete Nanomechanical Mapping of Soft Samples on Atomic Force Microscope, Nanotechnology