

NATHAN DAINO

Math student with interests in pushing the limits of Excel, Python, data analytics, operations research, and mathematical optimization

WORK AND SCHOOL HIGHLIGHTS

JANUARY-MAY 2022

PAPER AUTHORSHIP – MODELING TERRORIST NETWORKS

- Authored “Assessing Covert Network Optimality” – An investigation , in part, into detecting leaders from structure of terrorist networks
- Presented to peers in Privacy Enhancing Technologies class

JANUARY-MAY 2022

MATHEMATICAL CRYPTOGRAPHY SEMESTER PROJECT

- Constructed presentation: “Elliptic Curve Diffie Hellman Key Exchange” with Directed Reading Program – mathematical cryptography project
- Worked with graduate student in mathematics department.
- Presented to fellow Directed Reading Program participants, faculty, graduate students, and interested public.

OCTOBER 2021

SEPTEMBER 2021 ANNUITY TRADE EMAIL AUTOMATION

- Used Excel and Visual Basic to auto-generate client-bound emails based on annuity trade requests, and send them directly from Excel
- Responsive to user input of trade type (cash/exchange), form type
- Allowed for implementation across team of compliance officers, saving significant time on repetitive tasks
- Crafted the spreadsheet after tech representatives suspected unfeasible to perform in Excel

SEPTEMBER 2021-PRESENT

MATHEMATICS TUTORING

- Tutored clients in high school level mathematics and calculus

EDUCATION

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

- Course work in number theory, proofs/discrete math, linear algebra, multivariable calculus, differential equations

SOUTH PIEDMONT COMMUNITY COLLEGE / ASSOCIATE OF SCIENCE

- August 2016-May 2020
- Associate of Science degree, graduated with honors
- Maintained 4.0 unweighted GPA

SKILLS

- Experience in Python (3 years) with emphasis on numerical packages (Numpy, matplotlib, NetworkX)
- Modeling information flow with graph theory
- 3+ years advanced Excel, VBA
- Pursues math programming challenges in free time
- Knowledge in SQL queries
- Automatic formatted document generation
- Interests in optimal transport and queueing theory
- Extensive experience working one on one with clients
- Number theory for transportation logistics optimization
- Excel-based optimization projects
- Linear and integer programming
- Python web app creation (Flask) with JavaScript
- Mathematical scheduling optimization
- Interactive VBA Excel dashboards
- Python-based web scraping
- Experience with physics lab instruments

