ALEXANDER JANIAK

270 Bridle Path
Mountainside, NJ 07092

Email: avj6@duke.edu GitHub:@alexjaniak Website: https://alexjaniak.com 908.400.6216

EDUCATION

Duke University **Durham, NC**
B.S in Computer Science & B.A in Philosophy; Minor in Mathematics *Class of 2025*

- GPA: 3.96/4.00 (Dean's List)
- Notable Classes: Design & Analysis of Algorithms, Data Structures & Algorithms, Probability, Intro to Computer Systems, Vector Calculus, Matrices & Vector Spaces, Computer Network Architecture, Discrete Math for Computer Science

Governor Livingston High School **Berkeley Heights, NJ**
Graduate *Class of 2020*

- GPA: 4.86/4.50; ACT: 36/36; Varsity Track and Field Hurdler

PERSONAL PROJECTS

- CLPM: A locally encrypted command-line password manager built with 256-bit AES encryption; Python, SQLite3, and Click.
- Pet Breed Classifier: A convolutional neural network using a 34-layer ResNet architecture trained on the Oxford-IIIT Pet Database; Python, TensorFlow, NumPy, and Pandas.

SKILLS

- Python, Java, C, JavaScript, Racket, Git, HTML, CSS, FastAPI, Scikit-Learn, Keras/Tensorflow, Polish

EXPERIENCE & LEADERSHIP

Aztec Network Grant Program: zkMNIST **Remote**
Software Developer & Grantee *July 2023 – Current*

- Testing the limits of Aztec's DSL, Noir, for zero-knowledge (ZK) machine-learning by creating a circuit to prove/verify the output of an artificial neural network trained to classify handwritten digits.
- Building a full-stack application to provide an easy interface to verify/prove the prediction of handwritten digits using Next.js, Typescript, Solidity, Python, Keras/TensorFlow.

Spice Finance **New York, NY**
Software Developer *May 2022 – August 2022*

- Designed and developed a decentralized finance product focused on liquidity scaling for digital assets that led to $1.7mm of funding at a $20mm valuation.
- Built a full-scale API with FastAPI for an industry-leading ML digital asset appraisal model.
- Designed and constructed an automated capital allocation algorithm for asset-backed lending in Python.
- Derived a variety of exotic option pricing models for asset-backed loans.

NJIT Provost Summer Research Program **Newark, NJ**
Research Intern under Professor Shahriar Afkhami *June 2019 – August 2019*

- Researched, simulated, and modeled the effects of several physical parameters on the dynamics of magnetic drug targeting using MATLAB's Machine Learning Toolbox.
- Computed a realistic range of injection locations and blood vessel radii for implementing magnetic drug targeting against invasive tumors.
- Optimized parameters to capture 80% of the magnetic particles using gaussian process, polynomial, and spline regression machine learning models.

ARCC: Pacific Northwest Gap Semester ***Pacific Northwest, U.S.***
Volunteer Team Member *February 2021 – May 2021*

- Cleared forest understory in the conservation effort against invasive Kāhili ginger in Volcanoes National Park under the guidance of Ranger John Stallman.
- Volunteered at a local Washington ultra-sustainable permaculture farm and commune.