ALEXANDER JANIAK

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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
- 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 built with Python, TensorFlow, NumPy, and Pandas.

EXPERIENCE & LEADERSHIP

Aztec Network **New York, NY**
Grantee *July 2023 – Current*

- Testing the limits of Aztec's DSL, Noir, for zero-knowledge machine-learning by creating a zk circuit to prove/verify the output of an artificial neural network trained on the MNIST dataset.
- 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, snarkjs.

Spice Finance **New York, NY**
Head of Web2 Infrastructure *May 2022 – August 2022*

- Designed and built a DeFi 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 strategy for asset-backed lending.
- Derived a variety of exotic option pricing models for asset-backed loans.

NJIT Provost Summer Research Program **Newark, NJ**
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.
- Found the range of injection locations and blood vessel radii for realistically implementing magnetic drug targeting against invasive tumors.
- Achieved 80% capture probability for 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.

SKILLS & INTERESTS

- *Skills:* Python, Java, C, Racket, Git, HTML, CSS, JS, FastAPI, Scikit-Learn, Polish
- *Interests:* Tea, Hiking, Crypto/DeFi, Weightlifting, Climbing, AI, Smash Bros