Nadina (Oates) Zweifel

nadinaoates@gmail.com | (616) 589-2729 | Chicago, IL | linkedin.com/in/nadinaoates | nadinaoates.com

DATA SCIENTIST

- Cross-functional collaborator with 6 years of experience in simulation and data modeling, along with a proven track record of success in experimental design, data analysis, and reporting, as demonstrated by 3 peer-reviewed publications.
- Self-motivated project manager with excellent communication and interpersonal skills and the ability to independently innovate and develop new methodologies to solve complex problems, as evidenced by a public software package and a research progress award.
- Fast learning and versatile researcher with a strong business mindset and enthusiasm for financial markets and the cryptocurrency and blockchain industry.

CORE COMPETENCIES

Continuous Learner	Python / C++	Data Analysis	Web3 / Cryptocurrency
Collaboration	PyTorch / Scikit-Learn	Statistical Modeling	Smart Contracts
Leadership	Cloud Services (AWS)	Machine Learning	JavaScript / Solidity

WORK EXPERIENCE

Web3 Developer
Self-employed
May 2021 - Present

- Conceptualized and delivered a web3 betting platform, taking it from ideation to production. Leveraged NextJS/React and NestJS with Typescript to ensure top-tier performance.
- Orchestrated the design, creation, and launch of 3 cryptocurrencies, including overseeing 3 initial coin offerings, 3 comprehensive audits, and listing on 6 major exchanges.
- Directed the development of decentralized applications (dApps), collaborating with development partners to successfully introduce an NFT marketplace and a decentralized exchange.
- Spearheaded frontend and on-chain smart contract updates, significantly enhancing the design and functionality of the decentralized exchange.

Research Engineer / Computational Scientist
Northwestern University, Evanston, IL
September 2016 — April 2023

- Led and managed the development of a new research simulation tool including leveraging the university's HPC cluster to run large scale computational experiments resulting in 3 publications and a public software package.
- Applied conventional statistics and machine learning to gain scientific insights from multi-dimensional time series including cross-functional collaborations resulting in a research progress award.
- Visualized and presented research findings to a diverse audience in 3 talks and 5 public presentations.
- Mentored and provided guidance to 3 Master's level students resulting in 3 thesis manuscripts and 3 successful graduations.

Data Science Intern
Shure Incorporated, Niles, IL
June 2021 – August 2021

- Developed and tested deep learning models including the management of data storage and training on Amazon Web Services resulting in the company's first synthetic voice generation model.
- Led the design and execution of acoustic simulations including collaborating with engineers across various teams.
- Documented and presented proof of concepts to management and company executives.

PERSONAL PROJECTS & INTERSTS

YouTube Channel @N0_crypto - https://www.youtube.com/@n0_crypto

- Regular reviews of different Crypto and Web3 projects which has yielded 100+ subscribers and 3000+ views.

Oates Talk Crypto - https://t.me/oatestalkcrypto

- Co-founder and active member of the community "Oates Talk Crypto" with 100+ members that is dedicated to bringing Web3 adoption to the masses through education and technical support.
- Planning and organizing of regular social Crypto events with the goal of building a local Web3 community in Chicago.

EDUCATION

PhD in Biomedical (Neural) Engineering
Northwestern University, Evanston, IL

Master of Science in Engineering
Grand Valley State University, Grand Rapids, MI

Bachelor of Science in Engineering
Zurich University of Applied Sciences, Switzerland

PUBLISHED SOFTWARE

WHISKiT Physics Simulator (2021) A research simulation tool that implements a physics model to simulate the mechanics of rat whiskers based on custom code and the Bullet Physics Library, written in C++.
Code: https://github.com/SeNSE-lab/whiskitphysics

PEER-REVIEWED JOURNAL PUBLICATIONS

Zweifel NO, Bush N, Abraham I, Murphey T, Hartmann MJZ (2021) A dynamical model for generating synthetic data to quantify active tactile sensing behavior in the rat. *Proceedings of the National Academy of Sciences* Jul 2021, 118 (27) e2011905118; DOI: 10.1073/pnas.2011905118

Zweifel NO, Solla SA, Hartmann MJZ (2022) Statistical characterization of tactile scenes in three-dimensional environments reveals filter properties of somatosensory cortical neurons. *Nature Communications (in review)*
Preprint: https://www.biorxiv.org/content/10.1101/2022.08.03.502632v1

My complete publication record can be found on Google Scholar.