

# Nadina (Oates) Zweifel

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## 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 research analyst with a strong business mindset and enthusiasm for financial markets and the cryptocurrency and blockchain industry.

## CORE COMPETENCIES

Python / C++

Data Analysis

Data mining

Web3 / Crypto / DeFi

PyTorch / Scikit-Learn

Statistical Modeling

Predictive Modeling

Smart Contracts

AWS / Heroku

Machine/Deep Learning

Data Visualization

TypeScript / Solidity

## WORK EXPERIENCE

### Blockchain Developer

#### Self-employed

May 2021 - Present

- Designed and developed an NFT minting dApp including the testing and deployment of two smart contracts based on ERC721A and ERC20 standards using Hardhat, Ethers.js, NextJS/React, and TypeScript.
- 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.

### 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 interdepartmental collaboration.
- Documented and presented proof of concepts to management and company executives.

## PERSONAL PROJECTS & INTERSTS

### YouTube Channel @N0\_crypto

- Regular reviews of different crypto and web3 projects yielding 100+ subscribers and 3000+ views.

### Oates Talk Crypto

- 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 crypto events with the goal of building a web3 community in Chicago.

## CERTIFICATES

### Encode Solidity Bootcamp

- Completed 8 weeks of bootcamp covering web3 frontend, backend, and smart contract development.
- Completed multiple web3 dApps including a token ballot, a lottery, and a betting dApp.

## 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](https://doi.org/10.1073/pnas.2011905118)

My complete publication record can be found on [Google Scholar](#).