# Adit Nuwal

an238@njit.edu | (929) 788-9500 | github.com/aditn2003/ | www.linkedin.com/in/aditnuwal18/ | Newark, NJ

## EDUCATION

**New Jersey Institute of Technology, Newark, NJ** **Expected Graduation: May 2026**
**BS Computer Science** **Current GPA : 3.79**

**Scholarship and Awards:** NJIT Academic Merit Scholarship, Dean's List: Fall '22, Spring '23, Fall '23, Spring '24, Spring '25
**Relevant Coursework:** Python, Java, Advanced Data Structures and Algorithms, Computer Architecture, Operating Systems, C, C++, Theory of Computation, Database Design and Management, Computer Networks, Cybersecurity, Data Science, Data Mining, Machine Learning, Big Data

## TECHNICAL SKILLS

**Programming Languages:** Python, Java, C, C++, HTML/CSS3, JavaScript, Typescript, Bash, Kotlin, PHP, SQL, Dart
**Frameworks:** Node.js, Next.js, React, Bootstrap, Spring Boot, Flask, Serverless, JavaFX
**Libraries:** Pandas, NumPy, Tensor Flow, Keras, Scikit-learn, Dash, Seaborn, Matplotlib, Plotly, Pubchempy, RDKit, ipywidgets
**Tools:** AWS, Git, Git Lab, REST APIs, Postman, Firebase, Linux, PostgreSQL, Flyway, Redis, DBeaver, MongoDB, Kali, Wireshark, Metasploitable

## WORK EXPERIENCE

**Department of Chemicals and Material Engineering, NJIT | *Research Assistant*** **June 2025 – Present**

- Cleaned, standardized and merged multi-source chemical datasets (~150 compounds, 20+ features each), resolving 100% of missing and inconsistent entries through custom preprocessing logic, boosting data reliability for PBPK model simulations
- Architected a Flask-based backend serving 10+ REST APIs that deliver structured JSON responses with 150+ chemicals' molecular properties, AEGL toxicology data and predicted risk metrics with a PubChemPy integration for real-time retrieval of missing compounds
- Spearheaded development of a full-stack chemical analysis web app with a responsive React + TypeScript frontend powered by Node.js, integrating Plotly for interactive AEGL/time-dose visualizations and implementing dynamic UI components like a live-search dropdown

**Ying Wu College of Computing, NJIT | *Teaching Assistant – Python and Operating Systems*** **September 2024 – May 2025**

- Assisted CS100/CS332 classes of 100+ students to understand core concepts of **O**perating **S**ystems and Python(**O**bject-**O**riented **P**rogramming) by providing expert assistance in resolving and debugging 99% of issues within 24 hours
- Graded weekly assignments and provided constructive feedback to enhance coding style and problem solving skills

**Bonzai Digital | *Backend Development Intern*** **June 2024 – July 2024**

- Developed, tested and deployed multiple REST APIs in a Spring Boot framework for direct file upload to Amazon Web Service S3 storage, improving backend performance by 25% for a faster response time and more scalable system architecture
- Wrote Kotlin code to debug and resolve a critical backend feature reducing the overall error rate by 50% after utilizing browser developer test tools to inspect network traffic and analyzing API response calls in collaboration with frontend team
- Optimized AWS Lambda functions within Serverless framework to allow for S3 object metadata extraction and extended API functionality to create copies of files from AWS S3 storage to the local database for frontend application on user request

**NJIT Digital Learning and Campus Support | *IT Service Desk Student Assistant*** **January 2024 - Present**

- Provide expert user assistance in computer hardware and software for NJIT's computing technology, including Andrew File System (AFS), VMware, Google apps, Microsoft Azure and Office 365 solving tech problems for 13,000+ students and staff
- Manage and troubleshoot over 200 IT trouble tickets monthly with a resolution rate of 99% within 3 days
- Increased IT team efficiency by 20% through updating and creating NJIT's internal technical documentation knowledge base

## PROJECTS

**Financial Assets Analysis Software | *Flutter, Dart, Firebase, TensorFlow, Machine Learning, Python, Pandas, NumPy, REST API***

- Engineered a Flutter application to fetch, analyze display market data for stocks and cryptocurrencies, using python as backend, REST APIs for real-time market data integration & Firebase for database and secure authentication
- Developed a stock price prediction model using Python's machine learning libraries, TensorFlow and Keras, leveraging LSTM neural networks for time series forecasting

**Data Breach Analysis Tool – Cybersecurity | *MongoDB, Express.js, React.js, Node.js, Python, Pandas, NumPy, Scikit-learn, TensorFlow, Machine Learning, Keras, Matplotlib, Seaborn, REST API***

- Created a full-stack MERN and Python data breach analysis tool to analyze historical data breach records using MongoDB for efficient data storage, Express.js/Node.js to serve secure REST APIs with JWT authentication, React Router and Material-UI for the UI and Recharts for interactive charts within a 24-hour hackathon
- Flask backend runs predictive models using Scikit-learn, TensorFlow and Keras with results visualized through Matplotlib and Seaborn.

**Trip Sync | *Microsoft Maps API, Marine Traffic API, PHP, HTML, CSS, SQL, JavaScript***

- Created Trip Sync, a dynamic web application that integrates Microsoft Maps API and Marine Traffic API to fetch and display real-time global ship locations on an interactive ocean map.
- Implemented frontend and backend logic using JavaScript and PHP to dynamically render ship positions, handle API responses, and update the UI based on live data queries.