# Zihe (Peter) Zhang

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## EDUCATION

**University of Pennsylvania** — Philadelphia, PA
*Master of Science in Engineering in Data Science* — *Expected May 2026*

**Rutgers University- New Brunswick** — New Brunswick, NJ
*Bachelor of Science in Computer Science and Data Science, Minor in Statistics* — *Sep 2020 – May 2024*
GPA: 3.9/4.0
Relevant Coursework: Data Structures, Algorithms, Data Management, Software Engineering, Machine Learning

## EXPERIENCE

**Research Assistant** — Sep 2023 – May 2024
*Rutgers Cancer Institute of New Jersey* — *New Brunswick, NJ*

- Developed computational methods for non-invasive cancer detection from blood tests using epigenetic signatures
- Implemented machine learning algorithms on Chromosome fragment matrices, including random forest, Non-negative Matrix Factorization, hierarchical clustering, and visualizations in Python with numpy, pandas, matplotlib, and sklearn
- Analyzed tissue origin by examining gene expression patterns within cell-free DNA using regression and correlation techniques
- Created 5 Circos graphs to visualize DNA amplification/deletion in ovarian cancer studies using the pyCirclize library

**Support Specialist** — Sep 2022 – Dec 2022
*Rutgers Digital Classroom Services* — *New Brunswick, NJ*

- Managed equipment functionality and replacement across over 70 classrooms, maintaining item logs
- Assisted faculty with in-class technologies (podiums, projectors, and more), collaborating with technical teams to resolve hardware/software issues and reducing technology failure frequency by 30% through early debugging

**Full Stack Developer Intern** — May 2022 – Sep 2022
*Revolutionary Integration Group Inc.* — *Bethany, CT*

- Built a React web application to assess Python's facial recognition libraries, such as OpenCV and dlib, enabling user photo uploads for similarity comparisons
- Tested various third-party facial comparison APIs to achieve accuracy above 70% for similar images
- Designed a React Native mobile app for Venue Safety using Expo packages, designing UI with bubble.io
- Led a team of 7 interns to integrate backend facial comparison APIs with frontend applications using Amazon Web Services (AWS) EC2 instances

## PROJECTS

**College Recommender** | *React, Node.js, Express, MySQL* — May 2024

- Created a full-stack web app enabling high school students to explore over 300 colleges, allowing searches based on grades, food quality, safety, and reputation
- Implemented search, save, comment, and college matching features for user browsing
- Built an admin system to monitor user accounts, databases, approve new college requests, and post announcements

**Year In Mood (Mood Tracker)** | *React, Node.js, Express, MySQL* — Jan 2024

- Deployed a full-stack web app for tracking emotions and mental health on an interactive calendar interface
- Incorporated features to color-code dates by emotions, log journals, visualize mood distributions with various graphs, and analyze word frequency using word clouds

## TECHNICAL SKILLS

**Languages/Frameworks:** Python, Java, JavaScript, Node.js, SQL, HTML/CSS, React, R
**Developer Tools:** Git, GitHub, VS Code, Postman
**Certifications & Training:** IBM Data Science Certificate, IBM Full Stack Developer Certificate