

Denish Patel
108 Poplar Street, Jersey City, NJ 07307

dp9798@princeton.edu
929-371-9720

EDUCATION

Princeton University | Princeton, NJ 08544

Expected May 2026

Concentration: B.S.E. in Computer Science

Current Courses: Programming System; Multivariable Calculus; Linear Algebra; Statistics and Data Analysis; Modern Solid Mechanics; Drawing I

Relevant Coursework: Computer Science: An Interdisciplinary Approach; Algorithm and Data Structure; Calculus I & II

North Bergen High School | 7417 John F. Kennedy Blvd, North Bergen, NJ 07047

June 2022

Awards: Presidential Award for Academic Excellence, Math League Award, Art Award, NASA Langley Student Art Contest

Scholarship Reception: North Bergen Education Association, North Bergen Federation of Teachers

SKILLS

- **Programming:** Java (Intermediate), Python, HTML, CSS, SQL
- **Graphic Design:** Photoshop (Advanced), Procreate (Advanced), Canva (Advanced), Illustrator (Novice)

SELECTED TECHNICAL PROJECTS

Autocomplete (Java)

February 2023

- Developed an autocomplete system that predicts user queries based on a set of terms to improve user experience in text input and search functionality.
- Utilized binary search and sorting algorithms to enable accurate query predictions, supporting features such as prefix-based search and weight-based term ranking.

Touring New York (Java)

November 2022 - December 2022

- Designed and developed a dynamic mapping application to showcase New York City's 4000+ seating locations, enhancing accessibility for potential tourists, and eliminating the need for online searches.
- Implemented legend-based filtering and click-to-display features using Java Swing framework for user-friendly map navigation and detailed seating information retrieval.

Image Classifier (Java)

October 2022 - November 2022

- Designed a handwritten digit classification system using supervised machine learning, improving accuracy in recognizing digits from input images.
- Implemented the perceptron algorithm for system training and testing on unseen data, enhancing system reliability.

Dynamic Survey Form Development (HTML, CSS)

June 2023 - July 2023

- Designed and implemented a responsive survey form, featuring intuitive input fields such as text, email, dropdown lists, radio buttons, and checkboxes.
- Enhanced user experience through custom styling, including linear gradients and background imagery, to create a visually appealing interface.

STEM EXPERIENCE

Undergraduate Researcher, Explore Emerging Computing - Salisbury University

May 2023 - August 2023

- Utilize topological data analysis techniques to analyze social network structures created using the "Social Circles: Facebook" dataset with more than 88,000 edges from Stanford Large Network Dataset Collection.
- Develop algorithms and methodologies using Python libraries such as Matplotlib, NetworkX, Giotto-tda, Ripser, and Scikit Learn as well as Processing 4 software to extract and interpret structural patterns in social networks.
- Collaborate with interdisciplinary teams to incorporate findings into practical applications such as targeted marketing and recommending content.

Member, AI Alignment - Princeton University

February 2023 - May 2023

- Explored the ethical, social, and economic implications of AI technology through in-depth discussions and analysis.
- Worked with a diverse team to examine various perspectives on AI alignment and its impact on society.

LEADERSHIP AND SERVICE

President, Computer Club - North Bergen High School

September 2019 - June 2022

- Initiated and facilitated participation in programming and robotics projects, fostering a collaborative environment to develop software engineering skills and promote competitive spirit.
- Coordinated industry guest speaker events to bring firsthand insights into software development practices and trends, enriching members' understanding and expanding their professional network.