# Vishrut Tiwari

https://github.com/VishTiwari

## EDUCATION

**Bard College** **Annandale-On-Hudson, NY**
Candidate for Bachelor of Arts in Computer Science **August 2018 - May 2022**
**Honors and Awards:** Dean's List and Distinguished Scientist award
**GPA:** 3.87

**Relevant Coursework** Data Structures, Design of Programming Languages, Computer Systems, Advanced Computer Vision, Econometrics, Physics I - II, Calculus I - III, Abstract Algebra, and Partial Differential Equations

## TECHNICAL SKILLS

**Programming Languages:**
Proficient: Java
Worked with: Kotlin, Javascript, C, Scheme, CSS, and HTML
**Software and Frameworks:** Processing, MatLab, Stata, Fusion360, Linux, git, bash, Point Cloud Library, and Three.js

## EXPERIENCE

**Bard College Nano and Micro Labs** **Annandale-On-Hudson, NY**
**Undergraduate Researcher** **Sept. 2018 - Present**

- Created 2D to 3D computer vision software written in Java
- Worked on and improved structure from motion software in Python
- Implemented least squares algorithm to compare two point clouds
- Coded and created microstructures using two-photon polymerization
- Operated fluorescent and optical microscopes, a scanning electron microscope, and an atomic force microscope

**Innovation Club** **Annandale-On-Hudson, NY**
**President and Founder** **Oct. 2018 - Present**

- Brainstormed technical projects to help innovate campus life
- Lead groups through planning phases of projects
- Managed group expectations and progress
- Created a food funnel machine using Arduino and a robotic arm to sort snacks
- Planned a mental wellness app that helps combat chronic depression

**Bard College Investment Club** **Annandale-On-Hudson, NY**
**Treasurer** **November 2018 - Present**

- Managed and allocated club funds for various projects and investments
- Analyzed stocks over a short term period
- Won profit margin competition for analyzing stocks

## PROJECTS

**Koterpreter** **Annadale-On-Hudson, NY**
**Inventor** **November 2020 - December. 2020**

- Created a Scheme interpreter using Kotlin
- Used hashMaps, stacks, and lists to implement an AST, environment, and parser
- Implemented using Peter Norvig's approach to designing interpreters

**JEV** **Annandale-On-Hudson, NY**
**Inventor** **March 2020 - May 2020**

- Created my own text editor that operates in the terminal
- Made with C and includes syntax highlighting, searching, and scrolling
- Extended text editor to work on Windows and Macs

**Beer Pong in Augmented Reality** **Annandale-On-Hudson, NY**
**Inventor** **April 2019 - May 2019**

- Created 3D AR game using techniques learned in 317: Advanced Computer Vision
- Implemented real-time ball movements using linear algebra and physics
- Added compatibility with web browsers and cameras using Javascript and Three.js