

# Shail Patel

patels17@rpi.edu | [shailpatels.me](https://shailpatels.me) | [GitHub/shailpatels](https://github.com/shailpatels)

## Education

- **Rensselaer Polytechnic Institute, (RPI)**  
*B.S. Computer Science, B.S. Cognitive Science*

May 2021  
GPA 3.60/4.0

## Core Technical Skills

**Languages:** C, C++, C#, PHP, Python, Haskell, Java, JavaScript, HTML, CSS, R

**Software & Tools:** git, Unity3D, Laravel, RStudio, L<sup>A</sup>T<sub>E</sub>X

**Courses:** Intro to Algorithms, Data Structures, Computability & Logic, Principles of Software, Operating Systems, Computer Communication Networks, Open Source Software, Computer Vision\*, Game AI\*  
\*Fall of 2019

## Work Experience

- **Submitty** [submitty.org](https://submitty.org)  
*auto-grading and homework submission server used by RPI* Spring 2018 – current
  - Full stack development in a Linux, Apache, PostgreSQL, and PHP/python tech stack
  - Implemented a QR code scanner to detect student IDs and separate batches of student exams automatically, saving hours of manual data entry from instructors
  - Designed and developed a system to detect and scan handwritten student ID numbers on exams through computer vision and an OCR model
  - Google Summer of Code 2019 summer mentor, reviewed and help implement an internal REST API
  - Wrote PHPUnit tests and selenium end to end tests for continuous integration and taught other members on automated testing
- **Visual Logic** [GitHub/VisualLogic](https://github.com/VisualLogic)  
*Undergraduate Research Project in Cognitive Science* Spring 2018 – Spring 2019
  - Research into formal and symbolic logic through software development
  - Built graphical interface to manipulate Existential graphs in order to teach formal logic
  - Used Unity game engine and C#
  - Worked in a research group led by a professor to implement specific features and designs
  - Produced and presented a research poster at RPI's undergraduate research symposium.
- **Computer Programming Instructor** Clinton High School  
*Taught an introductory computer programming course* Summer 2016, 17, 18
  - Developed a curriculum aimed at middle school students with no computer science skills
  - Engaged students and parents in STEM concepts and explored computer science topics
  - Introduced students to programming by writing applications and games in Java.
  - Taught robotics programming by demonstrating FIRST Robotics Competition programming challenges

## Publications

- A Graphical System For Logical Reasoning Using Existential Graphs *RPI Cognitive Science Dept.*  
*Shail Patel, Bram van Heuveln*
- Facilitating Discussion-Based Grading and Private Channels via an Integrated Forum *SIGCSE 2019*  
*Andrew Aikens, Gagan Kumar, Shail Patel, Evan Maicus, Matthew Peveler and Barbara Cutler*

## Personal Projects

- **The OpenBook project** [GitHub/OpenBook](https://github.com/OpenBook)  
*A replacement for traditional textbooks and ebooks* Spring 2019 – current
  - Built an interpreter to read a markdown-like syntax to generate digital books in the form of HTML pages
  - HackRPI 2019 Wolfram Alpha award, 15th place overall

## Awards and Honors

- Rensselaer Medalist *Spring 2016*  
*100,000 dollar scholarship recognizing math and science excellence*
- Rensselaer Dean's Honors List *Fall 2018 – current*  
*Grade point average of 3.50 or better and have no grade below C*