Shikhar Jaiswal

github.com/ShikharJ | jaiswalshikhar87@gmail.com
linkedin.com/in/shikhar-jaiswal-25427175 | shikharj.github.io

EDUCATION

IIT PATNA
B.Tech. in Computer Science and Engineering
2016 - Present | Patna, India
CPI: 8.47 / 10.0

TAGORE INTERNATIONAL, EOK
Intermediate/+2
May 2016| New Delhi, India
CBSE : 93.60 / 100

Matriculation
May 2014| New Delhi, India
CGPA: 10.0 / 10.0

COURSEWORK

COMPUTER SCIENCE
Programming and Data Structures + Lab
Algorithms + Lab*

MATHEMATICS
Real Analysis
Linear Algebra and ODE
Complex Analysis and PDE*
Discrete Mathematics*

MOOCS
Algorithms (Coursera)
Software Debugging (Udacity)
Software Testing (Udacity)

(*) courses to be completed by November 2017

OTHER PROJECTS

SIR SCRIPT-A-LOT
A collection of scripts for everyday programming convenience.

TECHNICAL SKILLS

PROGRAMMING
Proficiency:
C • C++ • Python • Cython
Familiarity:
Java

LIBRARIES AND TOOLS
CMake • MATLAB • SymPy
GNU Octave • OpenCV
• NumPy • Git

EXPERIENCE

GOOGLE SUMMER OF CODE 2017 | SymPy
May 2017 – Present | Mentors: Isuru Fernando and Sumith Kulal

- Improved overall infrastructure of *SymEngine*, a fast standalone Computer Algebra System (CAS) written in C++, and its Python wrapper, *SymEngine.py*.
- Introduced the use of SymEngine as an optional core for *SymPy*, a popular symbolic manipulation engine in Python, and *PyDy*, a multi-body dynamics tool-kit.
- Implemented the support for Relational operators and NaN data type in SymEngine, along with improvements to the Continuous Integration (CI), and increasing the code coverage of the entire library.

PROJECTS

GESTURES ALIVE | Gesture Recognition Package
July 2017 - Present

- Used Python libraries OpenCV and NumPy to build a gesture recognition app.
- Used web-cam to detect hand, and track its lateral movements to record gestures.

LET'S FOOTBALL | Design-Pattern Based Game Engine
May 2017- June 2017

- Programmed a Football Game Engine in C++ to simulate object interactions of a football game.
- Identified and solved design problems associated with Football, Players and Team Strategy using Observer, Decorator and Strategy patterns respectively.
- Implemented RCP support for resource management and garbage collection.

ENIGMA STEGANOGRAPHER | Steganography Tool
February 2017 – March 2017

- Implemented the well known 1930 Enigma I Cipher (used by the Axis Powers in World War II) in C++.
- Enhanced capabilities by adding additional military plug-board support and increasing the number of encrypting mechanical rotors.

ALIENS AHOY! | A Space Shooting Game
October 2016

- Developed a 2-D space shooting game in Python(3.5.2), using the Pygame Library.
- Implemented special features for raising difficulty at each new level.

HONOURS AND ACHIEVEMENTS

2016 Secured 98.71 percentile in JEE Advanced among 0.2 million candidates
2016 Secured 99.54 percentile in JEE Main among 1.2 million candidates
2016 Secured 99.13 percentile in National Entrance Screening Test (NEST) among 40,000 candidates
2016 Recipient of Kishore Vaigyanik Protsahan Yojana (KVPY) Scholarship
2013 Recipient of CBSE Award for Community Service - Human Rights and Social Equality