# Rahul Goswami

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## EDUCATION

### NIT UTTARAKHAND
B. Tech. in Computer Science
Expected Apr 2020
Cum. GPA: 8.97 / 10.0
Major GPA: 9.15 / 10.0

### LAKES INTERNATIONAL
Sen. Secondary
Apr 2016 | Bhimtal, India
Percentage: 91.16 %

## SKILLS

### LANGUAGES
Over 20,000 lines: Python
Over 50,000 lines: C++
Familiar: Java, MATLAB

### TOOLS AND SOFTWARES
•C++ STL libraries •NumPy
•Keras •SKLearn
•Pandas •OpenCV
•Git VCS •PyCharm
•VSCode •Geany

### OPERATING SYSTEMS
•Linux •Windows •MacOS

## LINKS

Codeforces:// Rahul
Github:// goswami-rahul
LinkedIn:// rahul101
Kaggle:// rahul110
Codechef:// rahul_g

## KEY COURSES

### COMPUTER SCIENCE
Data Structures and Program Design
Analysis of Algorithms
Object-Oriented Methodology
Artificial Intelligence
Theory of Computation
Computer Graphics

### MATHEMATICS
Probability and Numerical Methods
Linear Algebra
Discrete Mathematics
Topics in Graph Theory

## EXPERIENCE

### IIT ROPAR | Research Intern • Deep Learning
May 2018 – July 2018 | Ropar, India

- Implemented deep learning algorithms on human burn images to identify and classify the burn areas.
- Published a paper with PhD candidate Ms. Joohi Chauhan and Dr. Puneet Goyal, at SaMBa: SIPAIM – MICCAI Biomedical Workshop, Granada, Spain.

## PROJECTS

### ALGORITHMS | Python • Open-source

- Maintain one of the largest collection of algorithms in Python (14,500+ stars on GitHub).
- Wrote 7,500+ lines of code until present.

### BURNS DIAGNOSIS | Deep Learning

- The model identifies and classifies a burned body part image using deep learning techniques.
- The project was completed as a part of research internship at IIT Ropar.

### ALIEN INVASION | Python • Shooter game

- An interactive shooter game similar to Galaga, using PyGame.
- Object-oriented design and easily customizable.

### POTHOLES DETECTION | Deep Learning

- Uses smartphone to collect video clips of roads, along with location.
- Deep Learning model detects the potholes with their sizes and count.
- Updates the map service with this data and shows visualizations

### TLE | Programming Discord Bot • contributions

- Maintains users' competitive programming data from CodeForces API.
- Recommends problems and contests based on user's rating.
- Plots graphs for various statistics of users.

## ACHIEVEMENTS

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|---|---|
| Mar 2019 | 1st place in The United States - Google HashCode Quals. 2019 |
| June 2019 | Qualified upto Round 3 - Google Code Jam 2019 |
| Mar 2019 | Finalist at National coding Hackathon by Johnson and Johnson |
| Apr 2019 | Finalist at National Road Safety team Hackathon by Bosch and IRSC |
| Present | Top-100 in India at CodeForces |
| Dec 2018 | ACM-ICPC – 21st in the online round; 33rd at the onsite round |
| Jan 2018 | Winner of CodeWar at TechMeet' 18, NIT Uttarakhand |