

# Kumar Ayush

Indian Institute of Technology,  
Ropar  
Undergraduate  
Final Year

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Punjab, India  
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<https://github.com/ghost-60>

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## Education

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### Indian Institute of Technology Ropar / B.Tech

July 2015- Ongoing | CGPA - 6.75 (B-)

### St. Michael's High School, Patna / Intermediate

July 2013- May 2015 | Percentage - 96.2

### St. Karen's High School, Patna / Matriculation

2001- 2013 | Percentage - 93.4

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## Research experience

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### Research internship / National Chung Cheng University, Taiwan

May-August 2018

Implementation of concept based on ACCV 2016 paper using LSTMs and hierarchical RNNs to detect and predict road crashes.

<https://ghostninjablog.wordpress.com/2016/06/26/first-blog-post/>

### Haze removal / Publication (Due November 2018)

September-November 2018, Mentor - Dr. Murala, IIT Ropar

Implementation of a multi-channel multi-scale convolutional neural network to recover the original image from a hazy image.

<https://arxiv.org/abs/1801.08406> (Previous version)

### Self-driving car simulation/ Project under IIT Ropar software community

February 2018 - present, IIT Ropar

To develop and train an automated car using deep RL operating on dashcam video that could be scaled to similar decision-making application.

### Neuroevolution for augmenting topologies/ Self-project

September-November 2017, IIT Ropar

Implementation of the concept based on the paper, by Kenneth O. Stanley which explains evolving neural structures using genetic algorithms.

### Neural Artistic Style Transfer/ Self-project

October-November 2017, IIT Ropar

Implementation of concept based on the paper, Gatys et al., 2015 which explains that the content and style of an image are separable.

<https://github.com/ghost-60/Neural-Artistic-Style>

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## Mini-projects

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**Multi-agent pacman using RL/ AI course**  
2018

**Kakuro solver using CSP / AI course**  
2018

**SimpleRisc Simulator**  
2018

Developed the Functional Simulator in C++ for SimpleRisc ISA (with 21 instructions) that simulates the working of the SimpleRISC processor and its state with 5 pipelines.

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## Awards

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ACM-ICPC 2017 regionals - Rank 25 out of 2300

Codeagon 2018 - Silver (Top 3 percentile)

Codeagon 2017 - Gold (Top 1 percentile)

Goldmann Sachs code sprint - Gold

Google kickstart 2017 - Rank 47

World codesprint 7 - Gold

Ad infinitum - Silver

Link to profile - [https://www.hackerrank.com/ghost\\_60](https://www.hackerrank.com/ghost_60)

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## Position of responsibility

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Co-founder of Software Community IIT Ropar

Core member for Enactus IIT Ropar

Core member of creativity club IIT Ropar

Volunteer at Bloodconnect IIT Ropar