# Vaibhav Agarwal

## Computer Science and Engineering, IIT Kharagpur

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vaiagarwal96@iitkgp.ac.in | (+91) 9734523790 E4-308, Meghnad Saha Hall, Indian Institute of Technology Kharagpur - 721302

#### **FDUCATION**

IIT KHARAGPUR B.TECH IN COMPUTER SCIENCE AND ENGINEERING 2014-Present | CGPA: 8.6/10.0

Mahatma Hansraj Modern School, Jhansi (CBSE) Senior Secondary Grade 12 Overall: 95.4%

CHRIST THE KING COLLEGE, JHANSI (ICSE) SECONDARY GRADE 10 Overall: 94%

## LINKS

Github:// VaibhavAgarwalVA LinkedIn:// VaibhavAgarwalVA CodeChef:// infiniticoder

# **CS COURSEWORK**

Algorithms 1, Algorithms 2\*
Software Engineering
Computer Organization\*
Programming and Data Strcutures
Compilers\*, Automata Theory
Discrete Structures
Linear Algebra\*, Graph Theory\*
Probability and Statistics
Switching Circuit and Logic
(\*denotes ongoing courses)

#### SKILLS

Programming Languages C/C++ • Java • Python • C# • php • x86 Assembly

**OPERATING SYSTEMS**Ubuntu • Microsoft Windows

UTILITIES
Git • Linux Shell

Git • Linux Shell • OpenCV • GDB • Łata • Docker

# **INTERESTS**

Algorithms and Graph Theory Robotics Data Analytics Artificial Intelligence Competitive Programming Software Testing

## AWARDS AND ACHIEVEMENTS

2014 All India Rank 217, JEE Advanced, among 150,000 candidates

2014 All India Percentile 99.99, JEE Mains, among 1.5 million candidates

2015 FIRA 2015, South Korea Bronze Medal for IIT Kharagpur

2016 RoboCup 2016, Germany Represented IIT Kharagpur

2015 ACM ICPC Asia Amritapuri Regionals finalist

2014 Academic Achievement Award IIT Kharagpur

2013 KVPY (Govt. of India) scholarship awardee

2010 National Talent Search (Govt of India) scholarship awardee

# EXPERIENCE AND PROJECTS

UNDERGRADUATE RESEARCHER | May 16-July 16 Indian Institute of Technology Kharagpur

- Developed positioning module for humanoid robots using Voronoi cell method and dynamic role assignment using maximum bipartite matching Hungarian algorithm.
- Integrated successfully. Increased time efficiency by 30%.
- Participated in RoboCup 2016, Germany.

# UNDERGRADUATE RESEARCHER | May 15-July 15 Indian Institute of Technology Kharagpur

- Created a path planner for differential drive autonomous robots.
- Decreased slip parameter to less than 1%.
- The team won Bronze at FIRA 2015, South Korea.

#### SOFTWARE DEVELOPER OpenSoft, IIT Kharagpur | Spring '16

 Created a software to extract details from a plot and tabulate them using OpenCV libraries and tessaract.

#### BACK END DEVELOPER Game Thoery Society, IIT Kharagpur

- Contributed to back end of an online game made using Codelgnitor framework in php.
- Played by over 1000 participants from across India.

#### IMAGE PROCESSING MENTOR IIT Kharagpur | Dec 15

- Mentored over 50 students in IEEE certified workshop.
- Taught various image processing techniques and algorithms.

#### CODE CLUB Programming Mentor | IIT Kharagpur

- Problem setter and tester in coding contests at IIT Kharagpur.
- Mentored over 100 students in algorithms and data structures.
- Provided logistics support for Bitwise 2016, which saw the participation of over 1000 programmers across the globe.

#### GRID FOLLOWER Robotics Workshop, IIT Kharagpur | Dec'14

- Attended Texas Instruments certified workshop and built an autonomous grid follower robot.
- Programmed the algorithm using DFS traversal to cover the entire grid in Atmel Studio.

## MISCELLANEOUS

- Attended RoboCup Symposium at Leipzig, Germany.
- Head of Algorithmic Game Theory Society, IIT Kharagpur.
- Sub Head of Maths Olympiad Team at MS Hall, IIT Kharagpur.
- Occasional contributor to Open Source. (my Github account)
- Winner at several programming contests.