

Kartikeya Upasani
Computer Science and Engineering
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Educational Qualification

Certification	University/Board	Year of Completion	Performance
Bachelor of Technology (B.Tech)	IIT Indore	2016	CPI: 8.79/10.0
Class 12 Board Examination	Maharashtra State (HSC)	2012	90.83%
Class 10 Board Examination	ICSE	2010	95.00%

Academic Performance at IIT Indore

Total no. of CS courses completed: 34
No. of CS courses completed with AA grade (10/10): 19
No. of CS courses completed with AB grade (9/10): 10
Best SPIs – **9.27** (Semester III), **9.29** (Semester V), **10** (Semester VII), **9.67** (Semester VIII)

Interests

Evolutionary Algorithms, Combinatorial Optimization, Cyber Physical Systems

Computer Skills

Java, C, C++, Python, MATLAB, MySQL, Android SDK, PHP, Git, LaTeX, Prolog, Scheme.

Achievements

- Secured All India Rank of 2817 out of 500,000 students (99.43 percentile) in IIT Joint Entrance Exam (2012).
- Nominated for In-Residence Programme at the Rashtrapati Bhavan (President House), New Delhi, India.
- Elected as President of Student Gymkhana (student government), IIT Indore (2014-15). Worked towards improving facilities and funding for students and student organizations. Served as student representative on academic and disciplinary committees.
- Recipient of INSPIRE scholarship for ranking within top 1% in Class 12 Board Examinations (2012).
- Received the Best Outgoing Student Award (2010), Arya Vidya Mandir School, Mumbai, for overall excellence in academic and extracurricular activities as well as contributions to school.
- Secured merit by ranking within top 1% in the National Chemistry Olympiad (2011).

Internships

Cisco Systems, Bangalore (Summer 2015)

- Worked on Secure Boot Architecture and Configuration of Cisco's ROSCO and ASR9000 devices.
- Developed a generic tool '*Parsely*' to automate router testing involving *router show commands*. Responsible for interacting with and supporting other teams, delivering features on demand, maintaining unit tests and documentation. *Parsely* is being used by several testing teams at Cisco today.
- Technologies used: Python, Sphinx, Linux and Shell Scripting.

Nectar Globe Technology Solutions, Mumbai (Summer 2014)

- Developed an Android app and web portal intended for enterprises to manage official photos and scans.
- Technologies used: Java, Android SDK, MySQL, PHP.

Projects

Industry Smartware [2014-ongoing]

- Deployment of Cyber-Physical Systems and Industrial IoT in manufacturing enterprises for intelligent planning and decision-making. Making enterprise assets intelligent, and creating a social network like environment for them, to make decision-making real-time and data-based.
- Role: Designing algorithms and creating industry-ready software. Worked with Multi-agent Systems, Monte Carlo Simulation, Genetic Algorithm, Particle Swarm Optimization, Java threading and networking.
- Funded by Department of Science and Technology (DST), Government of India.
- Project is in collaboration with AVTEC Limited - the largest Indian manufacturer of automotive components, for industry implementation, and with University of Cambridge, UK, for further work.
- **Publication:** Upasani, K., Bakshi, M., Pandhare, V., Lad, B.K. *Memetic Algorithm to Optimize Preventive Maintenance Schedule for a Multi-component Machine*. International Journal of Performability Engineering, 2016; 12(2): 183—195.
- **Publication:** “Distributed Maintenance Planning for Industry 4.0”, submitted to Computers & Industrial Engineering, May 2016.
- **Patent:** Application No: 201621007003, Indian Patent Office, filed on 29/02/2016.
- **Award:** Best Working Prototype Award, Student Research Symposium 2016, IIT Indore.

Career Genie – Career path recommending tool (2015)

- Implemented (C++) Support Vector Machines (SVM) for classifying student profiles into broad career options, and thus make recommendations to students.
- Collected data of students across 25 universities to build a knowledge base for training SVM and regression testing.

Algorithmic trading for currency exchange (2014)

- Built an algorithmic trading bot (C++) for maximizing trade of USD and Euro.
- Implemented a numerical optimization technique- Mesh Adaptive Direct Search to tackle the involved *blackbox* optimization problem.
- Tested the bot against past 10 years’ data, yielding profits always above required levels.

App to gather data on GSM signal strength of cell phones (2014)

- Developed an app (Android) to measure mobile phone signal strength across carriers for different locations, and its effect on device battery life.
- Used MySQL for storing data and PHP REST API for data input/retrieval.

IIT Indore’s Alumni Website (2013)

Extra-curricular

- Student Coordinator (Computer Science), Placement Office, IIT Indore (2015-16) – Handled university relations with companies such as Microsoft, Morgan Stanley, Cisco, Flipkart.
- Marketing Team, Fluxus (IIT Indore’s annual college festival) 2013.
- Head of Marketing Team, Fluxus 2014 – Procured a budget of Rs. 1,500,000 in 2013 and 2014.
- Football team – Mumbai district level for high school (2008), Inter IIT level for IIT Indore (2013).
- Table Tennis team – Mumbai district level for high school (2008, 2009), Inter IIT level for IIT Indore (2012, 2013).
- Literary Club, IIT Indore (2012-2016) – contributed to magazines, newsletters; took part and organized several debate and Model United Nations competitions.