Milind Hegde

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Education

2012 – Present	**Bachelor of Science**, *Indian Institute of Science*, Bangalore

Major in Mathematics, expected to graduate in May 2016. In the top 2 of the mathematics majors group of 21.

Latest Term GPA: 7.8/8   Cumulative GPA: 7.6/8

Has taken and excelled in advanced mathematics courses including measure theory, probability theory, stochastic processes, functional analysis, algebraic topology, real & complex analysis, commutative algebra, Galois theory, representation theory.

Exam Scores

GRE (General)

Verbal	Quantitative	Analytic Writing
170/170 (99 percentile)	170/170 (98 percentile)	5/6 (93 percentile)

GRE Subject (Mathematics)

To fill when made available officially.

TOEFL

Reading	Listening	Speaking	Writing
30/30	30/30	30/30	28/30

Research Experience

August 2015 – Present

Final Year Research Project, IISc
- Studying harmonic analysis, singular operators, and the Fock space.
- Working on an open problem regarding the boundedness of a certain class of integral operators on the Fock space (see Integr. Equ. Oper. Theory 81 (2015), pg. 451–454.)
- Gave a short proof of the unitary equivalence of the Hilbert transform to an integral operator on the Fock space.
- Under the guidance of Prof. S. Thangavelu.

June 8 – July 9, 2015

Participant in Visiting Students' Research Programme, TIFR, Mumbai
- Studied algebraic number theory, including Dedekind domains, unique prime factorization of ideals, finiteness of class number, and Dirichlet's unit theorem.
- Gave a twenty minute talk titled *The Sign of the Gauss Sum*.
- Under the guidance of Prof. Sandeep Varma.

May 5 – June 19, 2014

Research Project, IIT-Bombay
- Studied graph theory, extremal combinatorics, and the Complete Intersection Theorem. Wrote an expository article explaining the proof of the latter.
- Worked on a conjecture in extremal graph theory regarding the minimum size of the maximum cycle length in a certain class of graphs.
- Made some headway for small cases as well as for sufficiently large ones.
- Under the guidance of Prof. Niranjan Balachandran.

Summer 2013

Summer Project at Physics Department, IISc
- Studied fluid mechanics and the Plateau-Rayleigh Instability. Wrote a report summarizing the properties of the instability.
- Under the guidance of Prof. Arnab Rai Choudhuri.

Other Experience

2015 — **App Coordinator,** *Pravega,* IISc's Science and Technology Festival
- Was responsible for and coordinated the development of the Pravega map with an external developer.

2014 — **Editorial Coordinator & Designer**, *Quarks Magazine*, IISc UG
- Managed the editorial team and coordinated with other teams to bring out the magazine successfully and on time.
- Designed 3 articles in full, and was heavily involved with overall typography and type-setting of the magazine.

2013 — **Editor**, *Quarks Magazine*, IISc UG
- Selected for skill in writing, composition, editing. Further contributed to the magazine by ensuring that typographic rules were followed throughout.

2013 — **Core Committee Member**, *Pravega*
Tasked with major aspects of the fest, including website, design, events, and its founding.
- Was personally responsible for Pravega's General Quiz and complete website.

2013 — **Head of Web Team,** *Pravega*
Responsible for every aspect of the website (pravega.org/pravega2014), such as designing, coding, and administration. In particular,
- Implemented a login system with industry-standard cryptographic practices.
- Learnt PHP and MySQL for the purpose.

2013 — **Web Designer of IISc UG Website**
- Designed and coded the IISc UG website (iisc.ernet.in/ug).

2013 — **Typesetter**, *Scipher,* IISc UG Mock KVPY Exam
- Typeset the entire Scipher question paper for both the SA and SX question papers. Learnt to use LaTeX to write equations, chemical structures, physics diagrams.

Skills & Strengths

Programming — Has experience programming in several languages, including C, C++, R, Matlab, JavaScript, PHP.

Software — Comfortable with Microsoft Word, Excel, PowerPoint, Adobe InDesign, Adobe Photoshop, Mathematica, Matlab, R, LaTeX, among others.

Typesetting, Design, Typography — Sensitive to font choice, spacing, placement and arrangement of text, and overall design choices of documents.

Honours & Achievements

2013, 2014 — **ACM ICPC**
Qualified to the national level of the ACM ICPC, a prestigious international programming competition, of which approximately ten teams qualify to the international finals.

2012 – Present — **Kishore Vaigyanik Protsahan Yojana (KVPY) Fellow**
Awarded the KVPY Fellowship through the SX Stream. Among approximately 500 top students of science in India showing an aptitude for research.

2008 – 2012 — **National Talent Search Examination (NTSE) Scholar**
Awarded to the top 1000 students in India each year.

2012   **CBSE Group Mathematics Olympiad (GMO) Awardee**
Qualified the GMO to write the INMO (Indian National Mathematics Olympiad). Among 6 selected from across the country's CBSE schools.

2012   **Best Outgoing Student**
Honoured with the title of best outgoing student out of the 100-strong 2012 batch at Sri Kumaran Children's Home.