

Rohit Goswami

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haozeke

<https://github.com/HaoZeke/>



“An unproblematic state is a state without creative thought. Its other name is Death.”
– David Deutsch

Personal Data

Name Rohit Goswami

Date Of Birth 10.08.1995

Education

2014–2018 **B.Tech. Chemical Engineering**, *Harcourt Butler Technical University, Kanpur, India.*

61.94% First Division

2011–2013 **Intermediate (AISSCE)**, *Delhi Public School Kalyanpur, Kanpur, India.*

87.2% Central Board of Secondary Education (CBSE)

2009–2011 **High School (AISSE)**, *Delhi Public School Kalyanpur, Kanpur, India.*

9.8 Cumulative Grade Point Average (CGPA) in Central Board of Secondary Education (CBSE)

Experience

Internships

2017-PRESENT **Dr. Debojit Chakrabarty**, *Keva Fragrances Ltd, Mumbai*, R&D Industrial Intern.

Modeling complex multi-component perfumes in a predictive method via experimental and theoretical considerations. In collaboration with Prof. Rajdip Bandyopadhyaya of the ChemE Dept. at IIT Bombay.

SUMMER 2017 **Prof. Sibasish Ghosh**, *The Institute of Mathematical Sciences, Chennai*, Visiting Scholar.

Discussed computational techniques for the simulation and understanding of quantum tomography.

SUMMER 2017 **Dr. Nisanth Nair**, *Indian Institute Of Technology Kanpur*, SURGE Scholar.

An exploratory project to understand and deal with bottlenecks in computational chemistry, the major objectives were to investigate hybridization of existing code via OpenMP and MPI.

POSTER: Development of Computational Tools for Free Energy Calculations of Chemical Reactions

SUMMER 2016 **Dr. Rajarshi Chakrabarti**, *Indian Institute Of Technology Bombay*, Research Intern.

Retooled a server with ArchLinux and also simulated patchy colloids (Janus Particles).

PROJECT REPORT: Computational Survey of Coarse Grained Soft Matter Molecular Dynamics Simulations

Volunteer Work

2017–2018 **ChemE Herald**, *Harcourt Butler Technical University, Kanpur*, Editor-in-Chief.

Inaugurated and managed an interdisciplinary technical newsletter.

2017–2018 **HBTU-MUN 2018**, Secretary General.

Designed a ReactJS based static website, with Trello backed user registration, also performed outreach pre-events to raise awareness and participation, in addition to overseeing the working of the executive board.

- 2016–2017 **HBTU-MUN 2017**, Executive Board Chairperson.
Designed a Jekyll based static website and ensured adherence to standard MUN rules as Chairperson.
- 2014–2016 **The Curiosity Magazine**, *Harcourt Butler Technical University, Kanpur*, Editor-in-Chief.
Managed a diverse team of student content writers and also later typeset a spin-off multi-lingual newsletter in X_YL^AT_EX.

Technical Skills

Programming Languages

| | | | |
|-------------|-----------------------------|----------|---|
| EXPERIENCED | CSS, JS, HTML, Sass, C, Tcl | FAMILIAR | Ruby, C++, Julia, Python, Shell (zsh, bash), Golang, FORTRAN, ReactJS, Node |
|-------------|-----------------------------|----------|---|

Projects

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|-------------|--|----------|------------------------|
| EXPERIENCED | Android (Cyanogen, LineageOS, AOSP), Web-Design (static), Arch-Linux | FAMILIAR | Linux Kernel (Android) |
|-------------|--|----------|------------------------|

Simulation Projects

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|-------------|--|----------|---|
| EXPERIENCED | ESPResSo (Extensible Simulation Package for Research on Soft matter), LAMMPS (Large-scale Atomic/Molecular Massively Parallel Simulator) | FAMILIAR | OpenFOAM, GROMACS (GRoningen MACHine for Chemical Simulations), VMD (Visual Molecular Dynamics), CPMD (Car-Parrinello Molecular Dynamics) |
|-------------|--|----------|---|

Tools

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|-------------|---|----------|---|
| EXPERIENCED | X _Y L ^A T _E X, pandoc, Git (version control), tmux, ssh, Vim, Sublime Text Editor 3, gnuplot, gadfly, bspwm (tiling window manager), mosh, babun, MATLAB (matrix laboratory), Continuous Integration Services (Wercker, Travis CI, Semaphore CI), docker | FAMILIAR | AWS (Amazon Web Services), moltemplate, jekyll, middleman, grunt, gulp, Frameworks (Bourbon, Skeleton, neat) Markup Languages (Textile, HAML, Jade(pug)), Office-Suites (MS, OpenOffice, LibreOffice) |
|-------------|---|----------|---|

Operating Systems

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|-----------|-----------|-------------|--|
| PREFERRED | ArchLinux | EXPERIENCED | Windows (95, 2000, XP, 7, 8, 10), MacOS (10.7, 10.11, 10.12), Android (1.5, 1.6, 2.2.*, 2.3.*, 4.0.*, 4.4.*, 5.0.*, 6.0.*, 7.*), Linux Distros (Ubuntu, Sabyon, Puppy, Manjaro, Debian, Red Hat (CentOS)) |
|-----------|-----------|-------------|--|

Opensource Contributions

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|---------|---|-----------|----------------------------|
| CREATED | PixN ROM & Kernel (AOSP based rom for the Xperia Z5) HaoZeke's LineageOS | MANTAINED | Xperia Z5 LineageOS (14.*) |
|---------|---|-----------|----------------------------|

Opensource Projects Created

| | | | |
|----------|--|------------|--|
| ZENYODA | Pandoc based, tup driven stand-alone multi format (revealJS, beamer etc.) presentation system with static site generation. | DOCUYODA | A document generation system based on pandoc and latexmk driven by gulp with yaml configuration and easy templating. |
| STARDOCK | Docker compose based containerized self-updating setup for media hosting, with traefik for reverse proxying. Includes music, ebook and video acquisition and management. | PYQTNUMSIM | A Qt interface for verbose numerical methods assignments. |
| GRIMOIRE | Metalsmith and webpack based open source educational experiment with a strong focus on readability, equations and references. | | |

Interests

Chemical Engineering

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|-------------|---|------------|---|
| EXPERIENCED | Thermodynamics, Transport Phenomena, Mass Transfer, Heat Transfer, Molecular Dynamics (simulations) | INTERESTED | Chemical Reaction Engineering (Statistical Interpretation), Process Control |
|-------------|---|------------|---|

Physics

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|----------|---|------------|---|
| FAMILIAR | Statistical Thermodynamics, Density Functional Theory, Rare event sampling, Transition Path Theory, Markov State Models | INTERESTED | Quantum Phenomena (Computing, Thermodynamics), Phase Transitions (Thermodynamics, Simulations), Chaos Theory, Spectroscopy, Entropy, Information Theory |
|----------|---|------------|---|

Affiliations & Accolades

Memberships

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|--------------|---|
| 2006–PRESENT | World Taekwondo , <i>Red Belt</i> . |
| 2009–PRESENT | XDA Developers , <i>Senior Member</i> . |
| 2015–PRESENT | IEEE (Institute of Electrical and Electronics Engineers) , <i>Student Member</i> . |
| 2015–PRESENT | APS (American Physical Society) , <i>Student Undergraduate Member</i> . |
| 2015–PRESENT | OSA (Optical Society of America) , <i>Student Member</i> . |
| 2015–PRESENT | IOP (Institute of Physics) , <i>Student Member</i> . |
| 2015–PRESENT | AICHE (American Institute Of Chemical Engineers) , <i>Student Member</i> . |
| 2017–PRESENT | IICHE (Indian Institute Of Chemical Engineers) , <i>Student Member</i> . |

Awards

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|---------------|---|
| DECEMBER 2016 | Photonics-2016 , <i>Indian Institute Of Technology Kanpur</i> , Springer Best Student Paper Award, Nonlinear-Optics Session. |
| 2014–2015 | IITG Zephyr Creative Writing , <i>Indian Institute Of Technology Guwahati</i> , First Prize. |
| 2014–2015 | Antaragni IITK-MUN GA-DISEC , <i>Indian Institute Of Technology Kanpur</i> , Best Speaker. |

Publications

CONFERENCE PROCEEDINGS

R. Goswami and D. Goswami. “Quantum Distributed Computing with Shaped Laser Pulses.” In: *13th International Conference on Fiber Optics and Photonics* (2016). DOI: 10.1364/photonics.2016.w4c.3.

PREPRINTS

Nairhita Samanta, Rohit Goswami, and Rajarshi Chakrabarti. *Diffusion of self-propelled Janus tracer in polymeric environment*. 2017. arXiv: 1704.06207.