Rohit Goswami

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 haozeke
🌐 https://github.com/HaoZeke/

"An unproblematic state is a state without creative thought. It's 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

WINTER 2018 **Prof. Jayant K. Singh**, *Indian Institute Of Technology, Kanpur*, Project Associate.

Internships

2017-2018 **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⁓LᴬTᴇX.

Technical Skills

Programming Languages

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

Projects

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

Simulation Projects

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

EXPERIENCED	X⁓LᴬTᴇX, 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

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

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

EXPERIENCED
Thermodynamics, Transport Phenomena, Mass Transfer, Heat Transfer, Molecular Dynamics (simulations)

INTERESTED
Chemical Reaction Engineering (Statistical Interpretation), Process Control

Physics

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

2006–PRESENT **World Taekwondo**, *Red Belt*.

2009–PRESENT **XDA Developers**, *Senior Member*.

2015–PRESENT **IEEE (Institute of Electrical and Electronics Engineers)**, *Student Member*.

2015–PRESENT **APS (American Physical Society)**, *Student Undergraduate Member*.

2015–PRESENT **OSA (Optical Society of America)**, *Student Member*.

2015–PRESENT **IOP (Institute of Physics)**, *Student Member*.

2015–PRESENT **AICHE (American Institute Of Chemical Engineers)**, *Student Member*.

2017–PRESENT **IICHE (Indian Institute Of Chemical Engineers)**, *Student Member*.

Awards

DECEMBER 2016 **Photonics-2016**, *Indian Institute Of Technology Kanpur*, Springer Best Student Paper Award, Nonlinear-Optics Session.

2014–2015 **IITG Zephyr Creative Writing**, *Indian Institute Of Technology Guwahati*, First Prize.

2014–2015 **Antaragni IITK-MUN GA-DISEC**, *Indian Institute Of Technology Kanpur*, Best Speaker.

Reviews

OCTOBER 2018 **Journal Of Open Source Software**, *Reviewer*, Prest: Open-Source Software for Computational Revealed Preference Analysis.

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.

Certifications

NPTEL Courses

Aug-Sep 2018	**Computational Chemistry and Classical Molecular Dynamics**, *IIT Bombay*, Elite, 77%. License: NPTEL18CS13S21440127
Aug-Sep 2018	**Introduction to parallel Programming in Open MP**, *IIT Madras*, 40%. License: NPTEL18CS55S11440122
Jan-Apr 2018	**Quantum Computing**, *IIT Kanpur*, Elite, 65%. License: NPTEL18CY07S4480024