

# NHI NGUYEN

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## SUMMARY OF SKILLS AND QUALIFICATIONS

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**Operating Systems** | MacOS • Linux • Window  
**Applications** | VS Code • Affinity Design • MS Office  
**Programming languages** | Julia • Python • Java • R • SQL (beginner) • HTML (beginner)  
**Languages** | English - Fluent • Vietnamese - Native  
**Lab Techniques** | Enzyme assay • Chromatography • Spectroscopy • Gel electrophoresis • Cell culture  
• PCR • DNA Cloning • Western blot • Immunoprecipitation • Trypsin-digestion (Mass spectrometry)  
**Research Interests** | Bioinformatics • Machine Learning/Artificial Intelligent • Genomics

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## EDUCATION

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**Joint PhD - Genomic Medicine** **2023 - present**  
McGill University, Montreal, QC, Canada  
Kyoto University, Kyoto, Japan

**Bachelor of Science – Specialization Biochemistry (Co-op), Minor Computer Science** **2018 - 2023**  
Concordia University, Montreal, QC, Canada  

- Dean's list of all academic years for top 10% of the faculty's student
- GPA 3.84/4.30 (equivalent to 3.75/4.0)

**High School** **2013 - 2016**  
Gifted Program, Le Quy Don High School, Da Nang, Vietnam  

- Ranked in top 3 students with best performance in Chemistry
- Member of the Competitive Team in the Chemistry National Competition
- Graduate with Great Distinction: GPA 9.3/10

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## PROJECTS

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**Internship - Factorized embedding representation for small molecule activities prediction** **May, 2022 - August, 2022**  
Supervisor: Prof. Sébastien Lemieux, Bioinformatics Research Unit, IRIC, Université de Montréal  

- Objective: Implement a machine learning model to predict small molecule activities using factorized embedding being trained on gene expression profile in stead of molecular fingerprint.
- Practical techniques: Julia programming language, data analysis, machine learning

**Internship - Identification of SUMO1 substrates by LC-MS/MS** **May, 2021 - Dec, 2021**  
Supervisor: Prof. Pierre Thibault, Proteomics Platform, IRIC, Université de Montréal  

- Objective: Validate in vivo the unique SUMO1 SUMOylation of the prospective proteins, chosen from LC-MS/MS data analysis
- Practical techniques: Gel electrophoresis, DNA Cloning, PCR, Cell culture, Western blot, Immunoprecipitation, Trypsin-digestion of proteins for LC-MS/MS

**iGEM Concordia - AstroBio & AstroYeast** **May, 2020 - Dec, 2021**  
Concordia University, Montreal, QC  

- <https://2020.igem.org/Team:Concordia-Montreal>
- Part of a student-lead team working on a synthetic biology project to compete in the annual International Genetically Engineered Machine Competition. 2020 project - AstroBio: an open-source database for microgravity-induced gene expression. 2021 project - AstroYeast: a microgravity resistant yeast strain.

- Member of Genetics sub-team: did wet lab work and data analysis, recruited new members.  
Other general works: created content for iGEM wiki, contributed to the study of ethics and technology assessment of the project, transcribed interviews, joined iGEM GiantJamboree Conference (virtual).

## AWARDS & RECOGNITION

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**Marcus Lawrence Award**, Department of Chemistry and Biochemistry, Concordia University **May 2023**  
 • For highest achievement in the final year of study in the Co-op programme.

**IRIC Next Generation Award**, Internship **Aug 2022**  
 • Also **Best Poster Presentation - IRIC Intern's Day Conference**  
 • Project: ML model using Factorized Embedding

**Gold Medal**, iGEM 2020 and 2021 (teamwork) **Nov 2020, Nov 2021**  
 • Also **Winner of the Best Software Track Award**, be **nominated for the Best Inclusion Award**  
 • Project: AstroBio & AstroYeast  
 • Semi-finalists in the Deep Space Food Challenge held by NASA and CSA.

**Dean's list**, 2018-2019, 2019-2020, 2020-2021, 2021-2022 academic years

**Fourth Prize**, Chemistry National Competition for High School Student — 2016 **Jan 2016**  
 • This competition is for choosing members of the Vietnamese's team to compete the International Chemistry Olympiad (iChO) in the 2016 academic year.

## OTHER WORK EXPERIENCE

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**Laboratory Stock Keeper - Organic Chemistry Labs** **Jan 2021 - May 2021**  
 Concordia University, Montreal, QC  
 • Obtained training certificates: WHMIS 1988 and 2015, Hazardous material, Corrosive substances  
 • Clean equipments and lab spaces, provide the students with the necessary chemicals and equipments, perform other duties in the lab or storage room.  
 • Core competencies: familiarity with lab workspace and chemicals, organization and attention to detail.

**Vietnamese Language Teacher - Freelance** **2016 - 2018**  
 Da Nang, Vietnam  
 • Had students with wide range of ages (20-65), nationalities, occupations and levels.  
 • Prepared lessons for each student with different demands.  
 • Helped students (all of them are expats) to settle into a new country and experience the city like locals.  
 • Core competencies: teaching skill, initiative, communication, trustworthiness and ethic

## EXTRA-CURRICULAR ACTIVITIES

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**Member** **Jan 2017 - June 2018**  
**Danang Runner Club**, Da Nang, Vietnam  
 • Attended to scheduled training every week  
 • Volunteered for two annual international marathons and one IRONMAN Triathlon in the city, volunteered for club's small charity projects.  
 • Obtained a half-marathon finisher medal - Danang International Marathon 2017

## INTERESTS

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**Sports** Marathons running and triathlon  
**Passions** Outdoor activities (hiking, snow boarding), manga, anime, food and movies