

# Isaac Samuel Racine

Leuven, Belgium

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Starting date: early September 2023 | Open to relocating | Open to language classes

## EDUCATION

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**Katholieke Universiteit (KU) Leuven**, Leuven, Belgium

*Expected July 2023*

### ***Master of Science in Bioinformatics***

- Current GPA: 17/20 (Honors)
- Never needed to retake an exam
- Thesis under the supervision of Isabelle Cleynen (PI for Laboratory of Complex Genetics in the Department of Human Genetics) and Johan Van Weyenbergh (Senior Scientist at the Rega Institute)
  - Experience with imputation, GWAS, polygenic risk scores, accounting for ancestry, and modeling
    - Softwares: PLINK, samtools, PRSice, lassosum, TRACTOR, and many more tools
  - Practice with the implementation of command line tools for specific small tasks
- Proficient in R, intermediate in Python, UNIX, and Java; experience with HPC, Conda, Git, MatLab, SQL, snakemake
  - Exposure to the application of bioinformatic tools to large-scale omic data sets (including NGS data for genome, transcriptome, and metabolomics) and protein modeling software
    - Analyses included but were not limited to RNAseq (DGE), ChIP/ATAC seq, functional annotation evolutionary phylogenetics, population genetics, network expression (WGCAN)
    - Comfortable using and querying several different online biological databases
- Versed in machine learning, data science, and statistical modeling
  - Exposure to Bayesian inference
  - Specific course in neural network modeling
- Produced a semester-long project developing a pipeline in snakemake for automated polygenic risk score calculations using different algorithms

**University of Vermont (UVM)**, Burlington, VT USA

*Graduated May 2021*

### ***Bachelor of Science in Biological Sciences, Minor in Statistics***

- Final GPA: 3.76/4.0
- Plant genetics research work under Jill Preston (PI for the Laboratory of Plant Evolution and Development)
  - Learned basic genetic laboratory practices: PCR and cloning
  - Practiced experimental design
  - Performed a semester-long research topic on motif enrichment from a diverse clade of plants to determine which motifs are important in the vernalization pathways
- Semester abroad in Dortmund, Germany Spring/Summer of 2020

**TU Dortmund**, Dortmund, Germany

*Spring 2020*

- Occurred during the Coronavirus pandemic which allowed me to find strength in myself in a new environment with regulations changing frequently
- Made strong relationships with local Germans and was well integrated into society despite the ongoing circumstances

**Colchester High School**, Colchester, VT USA

*Graduated June 2017*

- Final GPA: 4.0/4.0
- Gave commencement speech and was a member of the National Honors Society

## WORK EXPERIENCE

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**Sweetwaters, Burlington, VT USA**

*April 2021 - August 2021*

**Server**

Manager: David Melincoff +1 802-233-1818

- The most fast-paced and largest staffed restaurant I have worked in
- Increased my multitasking skills and quick problem solving during stressful situations
- Further strengthened my ability to work in a team toward a common goal
- Became even more comfortable with local beer and wine recommendations to tourists

**Istanbul Kebab House, Burlington, VT USA**

*August 2019 - February 2020*

**Server and Bartender**

Manager: Hasan Oktay +1 802-857-5091

- Increased my communication abilities due to the large diversity in the clientele
- Fast-paced, with several table turnovers in a night and pagers to tell us when food is ready to be run
- Introduced me to several new cocktails, wine, and yet another POS system

**Vermont National Country Club, South Burlington, VT USA**

*August 2018 - February 2020*

**Server and Bartender**

Manager: Brittany Chase +1 802-264-9403

- Waited tables, usually dealing with several coursed meals and having to plan the timing of them
- Would occasionally work events, including weddings, funeral services, birthday parties, or any type
- Provided bottle service when ordered and gained experience with drink orders
- Learned how to create and mix wonderful cocktails

## LEADERSHIP EXPERIENCE

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**Healthcare Service Trip Pokhara, Nepal**

*May 2018 - June 2018*

**Volunteer**

- Help establish safe and clean teaching methods within the preschool environment
- Taught English along with basic first aid

**College of Agriculture and Life Sciences Student Representative, Burlington, VT**

*Fall 2017 - Spring 2020*

- Attending admitted student visit days to talk to prospective students
- Organizing events (i.e. workshops and informative lectures)
- Staffing events and attending meetings

## GOALS

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- Keen, focused, personable scholar motivated to continue researching/working in quantitative genetics and genomics
- Hoping to find a career that has opportunities for continual growth in my knowledge as well as my career responsibilities

## ADDITIONAL

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- Native English speaker with an A2 German and French