

SEOJIN JUNG

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 github.com/seojinjung

EDUCATION

Bachelor of Arts | *Biology with Honors, Computer Science*

AUGUST 2020 – MAY 2024

Amherst College

Amherst, MA

- GPA: 3.7/4.0
- Relevant Coursework: Data Structures, Algorithms, Machine Learning, Databases, Operating Systems, Advanced and Alternative Memory Systems, Statistics, Insect Biology, Cell Structure & Function, Disease Ecology, Microbiology

RESEARCH EXPERIENCE

Lab Researcher – Honors Thesis

MAY 2023 – MAY 2024

Blanchard Lab, University of Massachusetts, Amherst

Amherst, MA

- Conducted extensive literature review of forest soil microbiome ecology, bacterial decomposers, and metagenomics techniques
- Learned and used specialized software, such as microTrait and DESeq2, to analyze 817 metagenome-assembled genomes for identification and differential abundance measurements
- Collaborated extensively with working group EMERGENT, lab members, and the Joint Genome Institute, including presenting progress reports and working together on code
- Findings highlighted downward trend of microbial populations in Harvard Forest in response to long-term soil warming, as well as limitations of the tools used in the project

Research Assistant

DECEMBER 2022 – SEPTEMBER 2023

Purdy Lab, Amherst College

Amherst, MA

- Read scientific literature involving RNASeq procedures and analysis from both a biological and computational perspective
- Created an in-house RNA transcript analysis pipeline for comparing transcripts of wild-type and mutant strains of *Vibrio* and *Pseudomonas* bacteria
- Independently learned data science techniques (Python packages, FTP/SCP/SFTP, bash script, R)
- Assisted colleagues with the computational aspects of their project utilizing Breseq

Research Fellow

JUNE 2021 – JULY 2021

STEM Incubator, Amherst College

Amherst, MA

- Gained laboratory and research experience in biology, chemistry, and biostatistics, synthesizing copolymers, investigating the role of microtubules in cell mitosis, and conducting simulated health studies
- Collaborated with peers to ask and pursue research questions and come up with new solutions
- Collected data during various projects and presented findings to each other and wider audiences

WORK EXPERIENCE

Development & Administrative Intern (Remote)

JUNE 2026 – PRESENT

FUTR: Families United for Trans Rights

Washington, DC

- Hosting biweekly team meetings and following up with organization members on action items
- Assisting with creating and sending email campaigns, as well as tracking donations and mailing list subscribers
- Managing and updating organization's Squarespace website as needed, including writing custom CSS
- Developing a custom Google Apps Script library to automate certain repetitive tasks, such as formatting spreadsheets

Dental Assistant I, II (from November 2025)

JUNE 2025 – JANUARY 2026

Community Health Center of Franklin County

Greenfield, MA

- Seated patients in operatories, including taking vitals and dental radiographs (X-rays) as needed
- Provided chairside assistance to dentists during procedures such as tooth restorations (fillings), emergency and routine examinations, crowns, extractions, and dentures
- Maintained cleanliness of environment and tools by sterilizing operatories and processing instruments with ultrasonic cleaners and autoclaves, keeping thorough and consistent documentation throughout
- Managed appointment schedules and patient records in accordance with HIPAA via Epic software
- Stocked and organized inventory; submitted weekly orders of needed supplies and materials

Teaching Assistant

SEPTEMBER 2023 – MAY 2024

Computer Science Department, Amherst College

Amherst, MA

- Assisted with teaching labs in Introduction to Computer Science I (Fall 2023) and Computer Systems (Spring 2024)
- Held weekly evening help sessions for assignments and studying
- Acted as an additional learning resource for students

Remote Intern

MAY 2022 – AUGUST 2022

Affiliated Lab Directors, Inc.

FL

- Learned about procedures, regulations, and the administration of clinical laboratories under the guidance of a licensed lab director
- Completed weekly assignments that presented real-world lab directorship scenarios, such as lab inspections, proficiency testing, licensure, standard operating procedures, and more
- Became familiar with components of urine drug analysis, including HPLC-MS/MS, metabolites, Levy-Jennings charts (quality control), and Medicare billing

Healthy Herd Advocate

SEPTEMBER 2020 – MAY 2021

Science Center, Amherst College

Amherst, MA

- Encouraged safe and healthy behaviors among students on Amherst College campus during the COVID-19 pandemic
- Helped host events that raise awareness about the importance of maintaining health as well as the effects of the pandemic on students' mental and emotional wellbeing

PROJECTS AND RESEARCH

GERMSPIPE: GERMLINE Short variant discovery PIPELINE (ongoing)

JULY 2026 – PRESENT

An exploration of germline short variant discovery pipelines (independent)

 [GitHub repository](#)

Little Protein Guys: A simple protein visualization program | Python

FEBRUARY 2026 – MARCH 2026

Rudimentary program to visualize 3D protein structures in Python (independent)

 [GitHub repository](#)

Metagenome analysis of soil-dwelling bacterial decomposers following long-term warming using a reference genome approach | R

MAY 2023 – MAY 2024

Code used in undergraduate senior thesis

 [GitHub repository](#)

TECHNICAL COMPETENCIES

Tools: Microsoft Office Suite, Google Suite, Audacity, Clip Studio Paint, Jupyter, Visual Studio Code, Git, Unix/Linux, HPC, Zotero

Programming: Python (incl. Pandas, NumPy, scikit-learn, Conda, Bioconductor), Java, R, shell/Bash

Experience with Intel x86 Assembly, RISC-V Assembly, C/C#, JavaScript, LaTeX, SQL, HTML5/CSS

Selected R packages: microTrait, DESeq2, ape, coRdon, ggplot2, gRodon, pairwiseAdonis, EcolUtils

Experience with Seurat, ArchR, ClusterMaps

Other Research Skills: Pipetting, general microscopy, gel electrophoresis, ImageJ/Fiji, processing and analyzing data, PCR, bioinformatics

Field skills include handling, banding, and taking physical measurements of small birds, usage of RFID tags, order-level identification of insects

Certifications and Licenses:

- Basic Life Support (BLS) Certification (June 2025)
- Massachusetts Dental Radiology Certification (September 2025)
- Massachusetts Dental Assistant License (November 2025)