NHI X LUU

Silver Spring, MD 20906

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EDUCATION

University of Maryland, Baltimore County — **Rockville, MD**
B.S., Translational Life Sciences (Applied Biotech) - Bioinformatics; GPA: 4.0 — *Fall 2023*
B.S./M.P.S. in Data Science: Introduction to Data Science

University at Maryland - College Park — **College Park, MD**
Microbiology - Credits: 32 — *Jan 2018 - May 2019*

Montgomery College — **Rockville, MD**
A.S., Life Sciences; GPA: 3.83 — *Dec 2017*

TECHNICAL SKILLS & KNOWLEDGE AREAS

- **Programming Language**: Python, R, Bash/Shell, Java (Basic), Latex
- **Web Development**: Shiny, HTML/CSS, NodeJS, Express, Bootstrap
- **Bioinformatics Softwares/Tools**: Edirect API/SRA-toolkit, BLAST/NCBI, fastqc/trimmomatic, BWA, Samtools/BCFtools, Mummer4, SnpEff, GATK, BV-BRC CLI, ClustalX2, Jalview, ImageJ
- **Related softwares**: AWS Services (EC2, S3, RDS, Nextflow, Appflow), Docker, Scikit-Learn, Cloud Computing/HPC in Ubuntu/Redhat, Databases (MongoDB, SQL), REST APIs, GitHub
- **Laboratory/Instrumentation**: NGS/WGS Sequencing (DNA extraction, Library Prep, PCR, Gel electrophoresis), Cell culture, Immunostaining, Spectrophotometry (Nanodrop), HPLC, protein purification

RESEARCH EXPERIENCE

University of Maryland, Baltimore County — **Rockville, MD**
Merck Fellow/Student Research Assistant - Bioinformatics Pipeline — *08/2022- Present*

- Merck Fellowship: Designed and developed a user-friendly Genome browser using R/R-Shiny, automated back-end annotation workflow to analyze NCBI genomes and generate comparative genome visualizations
- Pending publication: Experimental Neutral Theory of Evolution on Genetics Adaptations and Mutation Rates of Ionizing Radiation Resistance in *Halobacterium salinarum*
- Develop genomics tools and automate variant calling workflow on Illumina/PacBio NGS data (*OmicsVM-configure: https://doi.org/10.5281/zenodo.7641805*)

Montgomery College – Biology Department — **Rockville, MD**
Research Assistant – Wound Healing Model Research — *07/2021- 10/2022*

- Establish optimal conditions for spheroid co-cultures in 3D to observe their interactions and patterns
- Perform tissue culture, scratch wound assay, immunofluorescence, HE staining on different cell lines for image and statistical analysis
- Developed and optimized lab protocols for future research projects on spheroids and viability with drugs

WORK EXPERIENCE

Adaptive Phage Therapeutics, Inc. — **Gaithersburg, MD**
Genomic Products Development Intern — *04/2023- 08/2023*

- Created a user-friendly R-Shiny dashboard for seamless communication and task tracking of bioinformatics pipelines across five departments by integrating SharePoint files with AWS services
- Enhanced phage genome accuracy and quality for FDA-regulated analysis by integrating BV-BRC databases and Mummer4 annotation into existing Docker and Nextflow scripts on AWS
- Acquired 20-hour training on phage and bacterial genome sequencing monitored by the APT Genomics Team, utilizing industry-standard DNA sequencing technologies (Qbit, Illumina RNA-Seq) and sequencing techniques (primer design, DNA extraction, library prep, Gel electrophoresis)

Phage Hunting Intern — *08/2022- 04/2023*

- Utilized aseptic microbiology techniques to enrich, isolate, and purify targeted phages against multi-drug resistant bacterial strains of clinical isolates
- Demonstrated meticulous adherence to cGMP and GDP standards in a BSL-2 laboratory, ensuring safe and efficient utilization of lab procedures, instruments, and tools in upstream processing