

Bhargav Srinivasan

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RESEARCH INTERESTS

I am interested in machine learning methods and theory for genomics, focusing on modeling and mechanistic interpretation of structural, epigenetic, and regulatory variation.

EDUCATION

University of Maryland

B.S. in Computer Science & B.S. in Biological Sciences

College Park, MD

Expected May 2027

- Computer Science + Entomology Departmental Honors, Gemstone Honors Program

GPA: 3.8/4

SELECT RESEARCH EXPERIENCES

Complex SV Identification — Kolmogorov Lab, National Cancer Institute

May 2026 – Present

Student Intern

Bethesda, MD

- Developing a deep learning method to identify and localize complex structural variation in cancer genomes.

Raw Signal Analysis Methods — Firtina Lab, UMD

Oct 2025 – Present

Student Research Assistant

College Park, MD

- Building methods for nanopore sequencing raw signal analysis: methylation detection, error correction, assembly.

Molecular Surveillance — AstraZeneca, Vaccines & Immune Therapies

May 2025 – Aug 2025

Bioinformatics Intern

Gaithersburg, MD

- Engineered and deployed a bacterial genome-processing pipeline supporting vaccine R&D surveillance efforts.

- Developed an unsupervised learning approach to identify non-typeable *Haemophilus influenzae* cell-type clusters.

Insect Genome Bioinformatics Pipeline — Fritz Lab, UMD

Feb 2024 – Present

Computational Biology Research Assistant

College Park, MD

- Analyzing WGS short-read data to determine basis of pesticide resistance through copy number variation.

- Benchmarking short-read structural variation and copy number variation callers in collaboration with Molloy Lab.

Fish Behavior Classification — Gemstone Program, UMD

Aug 2023 – Present

Student Research Assistant, Mentor Liaison

College Park, MD

- Developing a computer vision aided classification model to identify the social behaviors of Lake Malawi Cichlids.

HONORS & AWARDS

1. ISMB HiTSeq Best Poster Award

RawMod: A Deep Learning Approach to Modification Agnostic Classification in Nanopore Sequencing

[ISMB: Intelligent Systems for Molecular Biology](#), Washington, D.C., USA. July 2026.

2. Recipient of the Honors College Research Grant, CS Professional Development Fund, GO Fund, and Ernest N. Cory Undergraduate Scholarship

Funds collectively totaling over \$5,000 in support of independent research and conference travel.

SELECT PUBLICATIONS

1. Simon Ambrozak, Ulysse McConnell, Bhargav Srinivasan, Burak Ozkan, Ernest Zhang, and Can Firtina, “*CRANE: Correcting Errors in Raw Nanopore Signals Using Hidden Markov Models*,” [arXiv](#), 2026. [\[link\]](#)

2. Bhargav Srinivasan, Archana Venkataraman, and Srinivasa N. Raja, “*Artificial Intelligence and Pain Management: Cautiously Optimistic*,” [Editorial] **Pain Management**, Sep. 2024. [\[link\]](#)

3. Bhargav Srinivasan, Simon Ambrozak, and Can Firtina, “*RawMod: A Deep Learning Approach to Modification Agnostic Classification in Nanopore Sequencing*,” **in preparation**.

SELECT PRESENTATIONS

1. **RawMod: A Deep Learning Approach to Modification Agnostic Classification in Nanopore Sequencing**
Poster Presentation, [ISMB: Intelligent Systems for Molecular Biology](#), Washington, D.C., USA. July 2026.

2. **A Deep Learning Approach to Identifying Complex Structural Variation in the Genome**
Poster Presentation & Flash Talk, [NCI Summer School on Algorithmic Cancer Biology](#), Bethesda, MD, USA. July 2026.

3. **A Machine Learning Approach to Identify Unique Non-typeable *Haemophilus influenzae* (NTHi) Clusters Using Lipooligosaccharide (LOS) Biosynthetic Genes**
Poster Presentation, [ASM Microbe 2026](#), Washington, D.C., USA. June 2026.

4. **Correlations between Read Depth, Copy Number Variation, and Bt Resistance in *Helicoverpa Zea***
Poster Presentation, [PAG33: Plant and Animal Genome Conference](#), San Diego, CA, USA. January 2026.