Full-time Ph.D. student positions in Data Science and Bioinformatics

Tin Nguyen's Bioinformatic Lab
Auburn University
Department of Computer Science and Engineering (CSSE)

Multiple Full-time Ph.D. student positions are available in the Bioinformatics Lab at Auburn University, starting from Spring 2024 until all positions are filled. These positions are fully supported by Dr. Tin Nguyen's federal grants from the National Cancer Institute (NIH NCI), the National Institute of General Medical Sciences, (NIH NIGMS), the National Science Foundation (NSF), the National Aeronautics and Space Administration (NASA), and the United States Department of Agriculture (USDA).

Admitted Ph.D. students to the CSSE program will develop novel algorithms and software to solve contemporary problems in cancer and data science and artificial intelligence that can be applied in cancer, healthcare, agriculture, and space biology. This is a great opportunity to learn about state-of-the-art, large-scale data that are generated from modern instruments and develop novel methods for their analysis and interpretation. Students will learn to develop novel techniques in machine learning and bioinformatics, including but not limited to deep learning, large language models (LLM), and other techniques applied to big data analytics of patient and molecular data (single-cell, spatial transcriptome, DNA methylation, multi-omics, genome-wide association, etc.).

Each position offers a starting salary of $2,000 - $2500 per month depending on experience and qualification. The package also includes complete support for tuition, healthcare, public transportation, and other benefits for the whole Ph.D. program. Besides, the lab is equipped with powerful computing resources for high-impact studies. Applicants must have a bachelor's degree in computer science or related fields (e.g., engineering, mathematics, physics) with programming skills. Although domain knowledge is desirable (biology, cancer, etc.), it is NOT a requirement.

RESEARCH TOPICS

The topics of the research include, but are not limited to:

- Bioinformatics, computational biology, and systems biology
- RNA sequencing, single-cell data, spatial transcriptomics, multi-omics integration
- Pathway analysis, space biology
- Large language models, natural language processing, and artificial intelligence
- Machine learning and deep learning

More details about the lab can be found at: https://tinnguyen-lab.com/home/

QUALIFICATIONS

- The most important qualification is self-motivation and hardworking
- Bachelor's degrees or higher in Computer Science, Information Technology, Electrical Engineering, or closely related fields are preferred.
- A minimum GPA of 3.0 for a bachelor's degree.

- A minimum score of 80 for TOEFL iBT or 6.5 for IELTS (required for international applicants), but preferably 90 for TOEFL iBT or 7.0 for IELTS. **Applicants who have received a degree from an accredited institution in an English-speaking country are exempt from this requirement.**
- Solid programming skills and good mathematics knowledge.

HOW TO APPLY

If you are enthusiastic about joining our team, kindly email Dr. Tin Nguyen at tinn@auburn.edu your CV, unofficial transcripts from all previous universities, TOEFL/IELTS score (international applicants), and any materials enhancing your qualifications.

Our hiring process is straight-forward as follows:

1. Document review: We will review your profile and resume to see if you are a good fit for our team. If you are a good fit, we will send you the coding assignment.
2. Coding assignment: We will send you a take-home assignment to complete within 1 week. The assignment will be a small project, designed to assess how well you understand the problem at hand, and how quickly you learn a new programming language.
3. Zoom interview: We will review your assignment and schedule a final interview via Zoom. In the interview, Dr. Nguyen and his current PhD students will answer all of your questions about the PhD program, financial support, and life in America. After the interview, you will be invited to apply for the PhD program in the Department of Computer Science and Software Engineering at Auburn University.

ABOUT AUBURN UNIVERSITY

Auburn University is a public, top-tier and R1 research university located in Alabama, USA. Auburn Engineering has its brand recognition and is ranked no. 31 among Best Engineering schools in the USA (https://eng.auburn.edu/news/2023/04/graduate-programs-climb-ten-spots-in-rankings). The university is known for its successful graduated students, such as Apple CEO Tim Cook, NASA Astronaut Jim Voss, Wikipedia Founder Jimmy Wales, Oscar Winner Octavia Spencer, three-time Olympic Gold-Medalist Rowdy Gaines, etc.

The university is situated within the automotive industry hub and is only a 3-hour drive from Cummings Research Park, the fourth-largest research park in the world. The city of Auburn itself is a warm and welcoming college town, offering a plethora of outdoor activities for residents and visitors alike. It is conveniently situated near several major cities, including Columbus, Georgia (30 miles away), and Atlanta, Georgia (100 miles away). The city of Auburn has received accolades from CNNMoney, US News, Forbes, and, most recently, Livability, as one of the best places to reside in the United States.