## **Enes Kemal Ergin**

Contact Information

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Research Interests

Deep learning applications in genomics and epigenomics, cancer genomics, next-generation sequencing analysis, systems biology, machine learning applications

**EDUCATION** 

North American University (NAU), Stafford, Texas USA

B.S., Computer Science, May, 2017

Research EXPERIENCE

#### Visiting Researcher

Harvard Medical School

November, 2015 - September, 2016

- Research: Predicting the determinant of alternative splicing of RNA transcription
  - Worked with Lua/Torch, Python Pandas, Numpy, Matplotlib
  - Developed a deep learning model, convolutional neural network model using Torch7
- Research: Predicting transcription factor binding sites across cell types
  - Attended a ENCODE-DREAM competition: (Link)
  - Worked with Linux terminal tools, Python (Tensorflow, Pandas, Numpy, Matplotlib)
  - Implemented a deep learning model, multi-task convolutional neural network model using Tensorflow

#### Undergraduate Research Assistant

North American University

September, 2015 - present

Lead student of Bioinformatics Lab at NAU. Closely followed 4 students and mentored them. Created open source bioinformatics curriculum with Open Source Society in GitHub.

Yeditepe University

August, 2014 - May, 2015

Worked remotely as an genomic data scientist and investigated data from NCBI PubMed database. Utilized virtual docking software to determine the best possible inhibitor for specific molecule.

Texas Institute of Education and Research (TIBER)

September, 2014 - April, 2015

Worked as an experimental biologist on sinusitis bacteria. Designed experiments by preparing agar solutions, and bacteria culture. Only worked on wet-lab experiments.

TEACHING EXPERIENCE

#### North American University, Stafford, TX USA

Teaching Assistant

September 2015 - Present

Co-taught 3 undergraduate level courses for computer science department. Prepared the lab sessions and extra sessions on Git/GitHub, Rapid Python Programming, and Ipython/Jupyter. Shared responsibility for lectures, exams, homework assignments, and grades.

- COMP 3317 Algorithms, Fall 2015, 2016.
- COMP 3320 Programming Languates, Fall 2016.
- COMP 3322 Software Engineering, Fall 2016.

Instructor

February - April 2015

Taught Basic Python programming to 35 people including students, faculty, and staff of NAU, which was a first ever course taught purely by a student in NAU history. (Link)

**PUBLICATIONS** 

Kocabas, F., Ergin, E.K. 2016. Identification of small molecule binding pocket for inhibition of Crimean-Congo hemorrhagic fever virus OTU protease. Turkish Journal of Biology, 40:239-249.

#### Projects

#### Open Source Bioinformatics Curriculum

June 2016

4 year worth, open source source bioinformatics curriculum developed by my lab and contributed by open source society and other contributers around the world. (Link)

#### Scholar Development Center

February 2016

Created a non-profit community based organization under the Raindrop Foundation to help Turkish undergraduate students around Texas to achieve their dreams in academia or industry.

#### **Essential Algorithms**

September 2014

Put together a repository which contains algorithms from A Practical Approach to Computer Algorithms by Rod Stephens, Number Theory, and other useful algorithms written in Python. (Link)

### Honors and Awards

North American University: Exceptional Merit Scholarship, 2012-2017

North American University: Graduated Magna Cum Laude, Honors in Computer Science, 2017

North American University: Outstanding Student of the Year, 2015 North American University: President's Honor Roll , 2015-2017

# EXTRACURRICULAR ACTIVITIES

- Extracurricular NAU Kazakh Student Association, Club Advisor
  - ISCB (International society of computational biology), Member
  - NAU Future Leaders Club, Founder and Director
  - Student Government, VP of Unity and Social Justice
  - ACM (Association for Computing Machinery), Member
  - NAU ACM, Member
  - NAU ACM, Vice President
  - NAU ACM, Secretary

September 2016 - Present

August, 2016- Present

April, 2015 - Present

September 2014 - Present

February 2013 - Present

September 2013 - Present

September 2015 - May 2016

February 2013 - September 2014

#### TECHNICAL SKILLS

- Languages: Python(Pandas, Numpy, H5py, Tensorflow, Biopython, Scikit-learn), R, Java, LATEX, C/C++, Javascript, HTML, CSS
- Database Systems: SQL, MySQL, MongoDB
- Operating Systems: Unix/Linux, MacOS, Windows.

#### References

<sup>\*\*</sup>References upon to a request