

# HYEIN CHO

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## Summary

The combination of Computer Science and Biology majors can be used for cutting edge technologies, such as Biology Big data, and Deep Learning implication in Biological systems. By having two majors and one minor (Mathematics), I am preparing for the upcoming revolutionary topic which is a precision medicine for individuals by genome analysis and system genetics for human brain. I am a fast learner as programmers always should get used to new and effective programming languages, and biologists need to read the recent papers in their specialized field.

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## Research Interests

Precision Medicine, Neurogenetics, Genomics, Bioinformatics

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## Education

FALL 2017

### **Bachelor of Science: Biology / Valdosta State University, Valdosta, GA, U.S.**

Advanced coursework that I took: Comparative Biomechanics, Neuroscience, Bioinformatics, Molecular Biophysics, Immunology, Cell Biology, Protein Biochemistry, and Computational Immunology

FALL 2017

### **Bachelor of Science: Computer Science / Valdosta State University, GA, U.S.**

Valdosta State University provide many programming languages that student can utilize in IT industry. Advanced coursework: Big Data (using python to machine learning)

FALL 2017

### **Bachelor of Science: Minor in Mathematics / Valdosta State University, GA, U.S.**

'A's in all mathematic courses. Minors for learning advanced calculus and statistics, such as Operation Research and Probability and Statistics.

Total GPA is 3.8 out of 4.0.

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## Work History

06/2016 TO 11/2017

### **Research Assistant / Valdosta State University, Valdosta, GA**

Analyzed ordinary differential equations to simulate immune system in melanoma patient by programming mathematical model in Mathematica.

01/2019 TO 02/2019

### **Intern / Theragen Etex Biology Institute, Suwon, South Korea**

All trainee had a training process corporate with Biology Big Data and Precision Medicine which was managed by Seoul National University College of Medicine. I was designated at Theragen Etex Biology Institute that analyze genetic information of individual or assist researches in university professors or doctors interested in genetic data. My job was preparing for automation of WES pipeline used in the company and Web Programming using PHP/Code igniter framework.

04/2019 TO CURRENT

### **IT Assistant Manager / Dong-A Socio Holdings, Seoul, South Korea**

Dong-A Socio Holdings is the holdings company of Dong-A Science and Technology and Dong-A Pharmaceutical company. I am focusing on maintain laboratory and manufacturing system such as LIMS, EDMS/QMS, and ERP. Also, I construct a system for integrating all systems' database into one place and try to advance employees' work by standardizing their working processes.

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## Honors / Awards

Magna Cum Laude Academic Award Achieved: Fall 2017

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## Publications

Chakraborty, S., Cho, H., Colasito, M., and Shuraym, F. (2018). "E-Books: A Convenience, or a Loophole for Learning" CSREA Press: 3-9. ISBN: 1-60132-474-X.

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## Experience

03/2017

### **Volunteer Work / Valdosta State University, Valdosta, GA**

Volunteer to teach children in "Science Saturday" which is a school event to make science field interesting to children. I taught a web design and its developing to children.

09/2018 TO 02/2019

## **Trainee of Biology Big Data & Precision Medicine Analysis Program / Seoul National University College of Medicine, Seoul, South Korea**

It is the specialized training course of handling biological big data, mostly genomes. I learned Linux, python, R, Qlik visualization tools, SQL (PostgreSQL), NGS, Tensor-flow, which are critical techniques for Biology Big data. The course is supported by Dr. Juhan Kim and well-known Korean bioinformatic companies, such as Theragen Etex, DNA-Link, Synteka, Thermo-fisher Korea, and Chun lab. As a trainee, we conducted a project that was configuring pipeline of cancer vaccine, a personalized vaccine to cure cancer patients.

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### **Skills**

- Research Assistant
- Programming Skills (Linux, JAVA, MYSQL, Python)
- Analysis of Genomic Data produced by NGS platforms (WGS/WES, RNA-seq, De novo analysis, and scRNA-seq)
- Having both biology and programming background and can utilize in Bioinformatics, Genetics
- Fast Learner
- Eager to learn new skills

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### **Certificates**

- Program Certification of Biology Big Data and Precision Medicine: 2019.
- National certified SQL developer (SQLD): 2019.

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### **Languages**

Korean (native), English (bilingual oral and written fluency), Japanese (fluent)