

CHE YEOL (JAYEOL) CHUN

(+1) 404 797 7676 ◊ chunjy92@gmail.com

EDUCATION

Brandeis University Waltham, MA
Ph.D. Computer Science May 2023
Michtom Fellowship

Emory University Atlanta, GA
B.S. Mathematics and Computer Science & Physics, *summa cum laude* May 2018
Emory Merit Scholarship | Sigma Pi Sigma Honor Society | 100 Senior Honorary Class of 2018

TECHNICAL STRENGTHS

Programming Languages Python, Java, C/C++, JavaScript
Tools & Frameworks Tensorflow, Stanford CoreNLP, NLP4J, Scikit-Learn, Docker, Git

RESEARCH EXPERIENCE

Emory NLP Research Group, Emory University Atlanta, GA
Undergraduate Researcher Jun 2016 - Present

- Compiled three dependency treebanks in Korean (publication accepted, *LREC'18*)
- Augment dependency graphs converted from OntoNotes phrase structure trees with PropBank labels

Weissman Evolutionary Theory Research Group, Emory University Atlanta, GA
Student Research Project Leader Aug 2015 - Present

- Implemented Python APIs to simulate and analyze backward evolutionary trees of Kingman and Bolthausen-Sznitman coalescent models
- Made meaningful discovery of minimal set of tree features that help SVM identify the coalescent model that generated an evolutionary tree

Astro-Particle Physics Research Group, Georgia Institute of Technology Atlanta, GA
Student Research Project Leader May 2015 - Aug 2015

- Assisted in developing C++ data acquisition/analysis program that measures the photon detection efficiency of detectors to be used in astronomical telescopes

PROFESSIONAL EXPERIENCE

CAIDE Systems Lowell, MA
Intern, Deep Learning Researcher May 2017 - Aug 2017

- Wrote data processing script that leverages multi-processing to convert raw brain CT DICOM files annotated by doctors into deep learning-ready data using OpenCV
- Proposed an integrated framework of the A.I. software where the trained classifier's segmentation output guides GAN's generator to conditionally produce a patch on the most relevant area of the image and output synthetic CT data realistic enough to deceive GAN's discriminator

PUBLICATIONS

Building Universal Dependency Treebanks in Korean Miyazaki, Japan
Chun, Jayeol; Han, Na-Rae; Hwang, Jena D.; Choi, Jinho D. May 2018

- In *Proceedings of the 11th International Conference on Language Resources and Evaluation, of LREC'18*

Dependency Analysis of Abstract Universal Structures in Korean and English Atlanta, GA
Chun, Jayeol Apr 2018

- Honors thesis in the Department of Mathematics and Computer Science at Emory University

RELEVANT COURSES

Computer Science

Natural Language Processing
 Artificial Intelligence
 Data Structures and Algorithms
 Systems Programming
 Theory of Computing
 Discrete Structures
 Computer Organization & Assembly Programming
 Database Systems

Math & Physics

Probability and Statistics I & II
 Ordinary & Partial Differential Equations
 Math Methods for Scientists and Engineers
 Calculus & Linear Algebra
 Numerical Analysis
 Digital Electronics
 Computational Modeling
 Classical Mechanics

LEADERSHIP AND COMMUNITY ENGAGEMENT

Emory Data Science Club, Emory University

Senior Advisor

Atlanta, GA

Aug 2016 - Present

- Created and coordinated new program 'Emory Data 501' bench-marked from Data Science for Social Good (DSSG) aiming to provide platform for students to utilize technical skills to support non-profit organizations and execute campus-wide initiatives
- Initiated partnerships with Office of Residence Life at Emory and CPACS as part of Emory Data 501
- Participated in 'Python for Data Science Workshop' as technical assistant

Korean Scientists and Engineers Association, Emory University

Co-founder & Co-president

Atlanta, GA

Jan 2016 - May 2017

- Established national organization's chapter chartered by Emory to endorse STEM research and professional networking
- Director of 'EmoryKDev', a subsidiary group of aspiring software engineers and data scientists, having initiated projects ranging from Django-based web-development for peer student organization to replicating auto-swiper bot in Tinder using convolutional neural network
- Gave a talk 'Intro to Tech' at a peer student-led business organization on seeking employment opportunities in tech industry

Office of Residence Life, Emory University

Residential Advisor

Atlanta, GA

Aug 2016 - May 2017

- Served as peer mentor on issues ranging from roommate conflicts and identity crises to career counseling and research involvement
- Planned and facilitated programs with special emphasis on student success and social justice: the role of Asian community in Black Lives Matter movement, meditation sessions and big data as a main driving force behind social justice movements

TEACHING EXPERIENCE

Institute of Liberal Arts, Emory University

IDEAS (Interdisciplinary Exploration and Scholarship) Fellow

Atlanta, GA

Sep 2015 - Dec 2016

- One of three undergraduate instructors in charge of coordinating one-credit discussion-based course on the intersection of science and religion in Fall 2016

Department of Mathematics and Computer Science, Emory University Atlanta, GA
CS-170 (Introduction to Computer Science) Teaching Assistant Jan 2016 - Dec 2016

- Ran weekly lab sessions, graded homework assignments and held regular office hours

MILITARY EXPERIENCE

Faculty Board, Republic of Korea Air Force Academy Cheong-Ju, South Korea
English Communication Teaching Assistant Jun 2011 - Jun 2013

- Prepared class materials and guided debates in English communications class for cadets
- Presided over the squadron as the leader airman of Faculty Board, in charge of all administrative as well as military affairs for over a month
- Taught an introductory English communication class for airmen on campus
- Designed and operated English speaking class at local elementary school
- Honorably discharged as staff sergeant

EXTRA-CIRRICULAR

Emory Mascot Lord Dooley's Personal Guard (2016 - 2017)

Pledge Trainer Assistant, Alpha Phi Omega at Emory University (2015 - 2016)

Academic Fellow, Emory University. Mentor for incoming international freshmen (2015 - 2016)

Financial Head, Emory Astronomy Club (2015 - 2016)

Ad-Hoc Center for Diversity and Inclusion Advisory Council, Emory University (2015)

Chinese Calligraphy Club, Emory University (2014)

Seoul City 'One Less Nuclear Plant' Online Ambassador. Promoted the program on my Korean blog (2013 - 2014)

'Eco-Friendly Green Movement' Online Ambassador. Promoted the movement on my Korean blog (2013 - 2014)

Habitat ReStore Volunteer, Habitat for Humanity, Vancouver (2013)

Volunteer Photographer, FUN (Friends Uniting for Nature) Society, Vancouver (2013)

Volunteer Photographer, Places-des-Arts, Vancouver (2013)

ADDITIONAL SKILLS AND INTERESTS

Languages Korean (Native), English (Fluent), Mandarin Chinese (Basic), Japanese (Basic)

Fine Arts Photography, Acoustic Guitar, Vector Graphics Design

Interests Basketball, Meditation, Reading, Blogging