YEJIN CHA

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EDUCATION

University of Pennsylvania | Philadelphia, PA   **Sep 2021 - May 2023**
M.S.E in Computer and Information Science (GPA: 3.8/4.0)
- Coursework: Analysis of Algorithms, Artificial Intelligence, Big Data Analytics, Programming of the Web, Database & Info Systems

Colgate University |Hamilton, NY   **Aug 2017 - May 2021**
B.A. in Computer Science & Minor in Mathematical System Biology (Major GPA: 3.89/4.00)
- Graduated with Magna Cum Laude and Honors in Computer Science

TECHNICAL SKILLS

Proficient: Python, SQL, JavaScript, React, REST APIs, MongoDB, Node.js, Express.js, HTML5, CSS, Git, VS Code
Experienced: Java, MATLAB, NumPy, Pandas, Matplotlib, Scikit-learn, C, Heroku, Linux, Oracle, MySQL

EXPERIENCE

Colgate University | Hamilton, NY

Research Fellow | Department of Mathematics and Biology   **May 2020 – August 2021**
- Developed a mathematical model simulating human circadian rhythm clock with 30 ordinary differential equations in MATLAB
- Estimated 98 parameters successfully using a stochastic ranking evolution strategy parameter search algorithm that could reproduce experimental data linking 6 circadian clock genes and diurnal preference
- Submitted to The Journal of Affective Disorder and is under review for publication

Summer Research Fellow | Department of Chemistry   **May 2019 – August 2019**
- Constructed an efficient and reliable technique for cleaning and extracting useful Primary Biological Aerosol Particles (PBAP) data using python
- Analyzed seasonal and regional variations through graph visualization
- Handled 400+ commercial datasets collected using Instascope/WIBS-4 across the US

SELECTED PROJECTS

Social Media Application   **Oct 2021 – Dec 2021**
- Collaborated with 3 programmers in the development of a Reddit-like social media app using a MERN stack
- Implemented a real-time notification system for group and friend requests using socket.io, built a login page using react.js and express.js for front-end and back-end communication, and designed Rest APIs

Guess the Celebrity Game   **Nov 2021**
- Developed a full stack MERN application where players guess the name of 10 randomly chosen celebrities
- Managed data in MongoDB, conducted unit and end-to-end testing using cypress and jest, and deployed on Heroku

www.yejincha.com   **Oct 2021**
- Created a personal portfolio website from scratch to document personal growth in computer science

Predicting Response Severity to COVID-19 Vaccines   **Mar 2021 – May 2021**
- Pre-processed and trained data using different ML models (SVM, Random Forest, KNN, and Decision Tree) to binary classify COVID-19 vaccine response severity based on 6 different features

LEADERSHIP & EXTRACURRICULAR

External Affairs Coordinator | KoGSA | University of Pennsylvania   **Sep 2021 – Present**
- Managed an Instagram page with over 200 Penn Korean graduate students to communicate with stakeholders and promote events

Entrepreneur | Thought into Action Incubator | Colgate University   **Jul 2020 – Dec 2021**
- Co-founded "SkinEd", a data-based online educational resource aimed to educate customers on skincare ingredients and increase transparency in the cosmetic industry