Joo Yong Daniel Chung

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University of Illinois at Urbana-Champaign (UIUC) **May 2021**
Bachelor of Science in Computer Engineering - Highest Honors GPA: 3.82/4.00
Bachelor of Science in Statistics - Highest Distinction
Minor in Computational Science

- James Scholar Honors, IEEE Eta Kappa Nu (HKN) Honors Society, Certificate in Data Science, Jules D. Falzer Memorial Scholarship, Sargent and Lundy Engineering Scholarship, TechnipFMC Scholarship

WORK EXPERIENCE

Kilpatrick Townsend & Stockton **San Francisco, CA**
Patent Engineer - Software Division August 2021 - March 2023

- Drafted over 50+ patent applications based on new software inventions including Cryptographic Oblivious Transfer, Natural Language Processing using Machine Learning, Searchable Symmetric Encryption, Authentication Tokens, Secret-Shared Database Joins, Smart Contracts on Blockchain, Covariance Reduction Models, etc**.**
- Facilitated over 50+ meetings with clients (e.g., VISA, Doordash, Apple) to strategize scopes of legal protections (claims) over their inventions and recommend different types of patent applications to file for their inventions
- Composed over 10+ instructional letters and recommendations to foreign lawyers on patent applications, wherein each letter consists of strategies unique to each foreign country's rules and regulations in prosecuting the patents

Raytheon Missile System **Tucson, AZ**
Software and Electrical Engineering Intern May 2019 - August 2019

- Registered 10+ new circuit component models in **C++** that are not inscribed in the circuit software with inputs (e.g., max/min voltage) given in the component datasheets, resulting in more than 15% increase in simulation speed
- Developed over 10+ reuse design blocks in **C++** that are commonly used in circuit schematic design, leading to reduction in the cycle time of building new circuits and preventing the duplication of work from electrical engineers
- Analyzed the newly redesigned amplifier circuits for Evolved SeaSparrow Missile (ESSM) to identify any schematic mistakes in the design and created general block diagrams for different technical design reviews

University of Illinois - Graduate Upper-Division Hall **Urbana, IL**
Resident Advisor August 2018 - May 2021

- Provided academic counseling, career advice, and help with personal conflicts to the residents by holding consistent, weekly conversations, resulting in none of the residents to be held on to academic probation on over 150+ residents
- Led recruitment of new housing staff with the Resident Director by conducting a series of behavior interviews including assessment of interpersonal communication skills, conflict management skills, time management, etc.

PROJECTS

NBA Bracket Predictor 2023

- Created a web application that allows users to view each NBA team statistics, perform **CRUD** (create, read, update, delete) operations for their own prediction brackets, and share their prediction brackets by using unique user IDs
- Designed user-friendly layouts with Single Page Application UI in the Frontend by using **React.js**, **JSX,** and **CSS**
- Developed an extensive **RESTful API** using **Node JS** and **Express JS** to perform **CRUD** operations in the Backend
- Utilized **MongoDB** infrastructure to store user data of prediction brackets formatted in **JSON** data type

Prospectus - A Course Organization Tool

- Developed a web application that provides users with an ability to search school courses, explore an interactive pre/post requisite course graph, create a wishlist, access recommended courses, view course descriptions, etc.
- Scrapped the University of Illinois course data by using **Python**, **Pandas Library**, and **Jupyter Notebook**
- Implemented **MySQL** database to store users' relevant course data in Google Cloud Platform (**GCP**)

Sudoku Solver

- Designed a web application that generates a random sudoku puzzle, checks whether a sudoku puzzle given by the user is valid, and generates a solution to a sudoku puzzle using a **Backtracking Algorithm**
- Designed a comprehensive **Restful API** using **Java**, **SpringBoot**, and **MongoDB** in the backend where users can store both the sudoku puzzle and the sudoku puzzle solution using a unique user ID

ADDITIONALS/ACTIVITIES

- **Languages:** Python, R, C++, C, SQL, Mongo-DB, JSX, Javascript, HTML, CSS, Java, Bash
- **Tools/Libraries:** React.js, Node.js, Express.js, Git, Postman, Linux, SQL server, MongoDB Compass, AWS, GCP
- **President of Electrical and Computer Engineering (ECE) Student Advancement Committee** - Administered all student-led ECE department events and coordinated department-wide events with course staff and professors
- **President of Engineering Outreach Society** - Oversaw the planning of weekly new engineering projects for elementary school students and coordinated volunteering meetings with the staff of the elementary schools