Junehyuk Yoo

Computer Science and Linguistics

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EDUCATION

2020-2026 **University of Illinois at Urbana-Champaign** **Champaign, IL**

- Major: Computer Science and Linguistics
- GPA: 3.80
- Relevant coursework: Applied Machine Learning, Algorithms and Models of Computation, System Programming, Discrete Structures, Data Structures and Algorithms, Computer Architecture, Historical Linguistics, Elements of Syntax, Elements Semantics & Pragmatics, Calculus II, Linear Algebra, Statistics

2016-2020 **Hong Kong International School** **Hong Kong SAR**

- SAT: 1530 (R: 350 / W: 380/ M: 800)
- AP Coursework: AP Physics C, AP Calculus BC, AP Statistics, AP Psychology, AP Computer Science, AP Macroeconomics, AP Microeconomics, AP Chemistry, AP World History

WORK EXPERIENCE

Nov 2022-May 2024 **Exchange Systems Operator in the Republic of Korea Army** **Seoul, South Korea**

- Discharged as a sergeant of the 122nd Communications Group at the Capital Defense Command military base in Seoul. Worked within the CCC (Control Command Center) bunker in tandem with foreign allied troops.
- Managed inter and intra-base communications via commercial and military-grade call servers. This entailed managing analog phones, VoIP phones, encrypted military communications equipment, etc.
- Created and maintained circuits for analog phone lines (and hot lines), military satellites, radio networks, CCTVs, emergency alarm systems, etc.
- Learned to work as both a member and a leader of a team tackling complex issues regarding wired and wireless communication networks spanning cities.

July-Oct 2022 **Software Engineer Intern at DeepMetrics** **Seoul, South Korea**

- DeepMetrics is a venture capitalist firm based in Seoul National University that aims to implement machine learning and data analysis to tackle problems in the Korean healthcare industry.
- Handled data processing and analysis of vital files from ventilated patients in Seoul National University Hospital in order to develop an offline reinforcement learning algorithm to assist clinicians with manual mechanical ventilator control.
- Worked with Slurm based GPU clusters to process minutely ventilator data for hundreds of patients over the course of each patient's entire stay in the ICU.

PROJECTS

Openfloor **June-July 2025**

- Developed a fullstack debate platform using React+Vite (TypeScript) for the frontend and Express.js for the backend, supporting both public and private debates.
- Implemented user authentication and session management using passport-local, secure cookies, and bcryptjs for password hashing.
- Designed responsive, mobile-friendly UI with TailwindCSS and integrated Recharts for dynamic activity and analytics visualizations with React Context for global authentication state management and implemented role-based access control (RBAC) across the platform.
- Built RESTful API endpoints with robust CRUD operations for debates, stances, justifications, comments, and votes using Prisma ORM and PostgreSQL.
- Set up file upload and storage using Amazon S3 with CDN distribution via AWS CloudFront to optimize media delivery speed.

RELEVANT SKILLS

Programming languages: Python, Java, C/C++, HTML, CSS/Tailwind, Javascript/Typescript, Ruby, R, Assembly
Programming skills: OOP (Object oriented programming), PyTorch, React+Vite, Node.js, NumPy, Git, Vim
Language skills: Fluent in English, Semi-fluent in Korean, Beginner-level Chinese