

# Kye Son (Pyokyong)

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DUKE UNIVERSITY	<b>Bachelor of Science, Computer Science;</b> <b>Bachelor of Science, Economics</b> (Double Major); <b>Mathematics Minor</b> ; Foreign Lang. <b>Chinese</b> (2 yrs); <b>GPA: 3.82/4.0</b> ; Selection of coursework: - Math: graduate Mathematical Finance & Derivatives; undergrad Stat. Inference, Lin. Alg., Mult. Calc. - CS: graduate Deep Learning, Algorithmic Game Theory; undergrad. Databases, Advanced Algorithms - Economics: graduate Mathematical Finance & Derivatives; undergrad. Econometrics, Macro & Micro	<b>CLASS OF '25</b>
WORK EXPERIENCE	<b>Currently at Nomura Securities</b> , Risk Engine Developer - Large-scale <b>quantitative risk management (VaR, ES, etc.)</b> distributed data pipelines - In <b>Python (NumPy, Dask, Prefect)</b> , Interfacing <b>fixed income</b> quant libraries (C++) - Exploring <b>Machine Learning</b> for Risk VaR Prediction (cost reduction) <b>Nomura Securities</b> Market Risk Engines – <i>Intern</i> - Groundbreaking division's LLM use in risk analysis through CoT reasoning, ReAct agent and tool-use. - Automated fund report performance/quant extraction from reports using RAG and vision - Wrote libraries interfacing LLM and OLAP/SQL DBs, automating risk analysis tasks <b>Hitachi Social Information Solutions</b> – <i>Full-time Intern</i> - Spearheaded administration front-end development (Angular) for Hitachi's Public Biometric Infrastructure initiative. Client was Japanese local government. - Strengthened communication between developer and client with combined dev. and pros. mgmt. skills <b>Rep. of Korea Navy Interpretation Officer</b> - Lead interpretation for US-ROK Command Post Training (CCPT) exercises - Managed visiting crew from U.K., U.S., Indonesia, Germany for technical submarine tours <b>Cydoc Medical Notes</b> – <i>Front End &amp; Graphic Design Intern</i> - Oversaw a front-end UI overhaul with Javascript, React and Semantic-UI, branding guidelines & logo; adopted for final launch product <b>KKMani's Sprout Team</b> – <i>Financial News on Renewable Energy</i> - Full rewrite of a cross-platform email framework with HTML & CSS,	<b>PRESENT NYC</b> <b>SUMMER '24 NYC</b> <b>SUMMER '23 Tokyo</b> <b>NOV '20 - JUL '22</b> <b>SUMMER '20 Durham, NC</b> <b>SUMMER '19 Tokyo</b> <b>PRESENT</b>
RESEARCH	<b>Currently investigating Ethereum Restaking (Eigenlayer) protocol cryptoanalytic security</b> - with Duke PhD candidates in algorithmic game theory, theory of computation	
PROJECTS	<b>Wolfram Research Summer Program</b> – “Exploration of Fundamental Maths via Implementation of Common Axiom Systems and Proof Generation” ( <a href="#">link</a> ) <b>Homelab project</b> with <b>Debian/Arch Linux</b> , <b>ESXi</b> & <b>Proxmox</b> , with second-hand server parts Maintained services such as local <b>DNS</b> , <b>OpenVPN</b> , <b>Apache</b> web server for personal website	<b>SUMMER '18 Boston</b>
SKILLS	Contribution to <b>rust-coreutils</b> as part of OSS contribution and personal interest in <b>Rust</b> language design Proficient in <b>Python</b> (ML in PyTorch, Data Analysis in Prefect, Pandas), <b>MinIO</b> , <b>Nexus</b> , <b>CI/CD</b> , Advanced <b>SQL</b> , Apache <b>Avro</b> , <b>Parquet</b> formats, <b>Linux Internals</b> , <b>C &amp; ARM Assembly</b> (Coursework), <b>Mathematica</b> (Math Research), <b>Javascript/Typscript</b> with <b>React &amp; Angular</b> (Work experience)	
LANGUAGES	Fluent in <b>English</b> (TOEFL: 119/120, IELTS: 8.5/9), <b>Japanese</b> (JLPT N-1: 175/180), <b>Korean</b> (Native Speaker) Business capable in <b>Chinese</b> (2 years coursework)	
LEADERSHIP	<b>Lambda Phi Epsilon</b> , Duke Associate Chapter, <b>Treasurer</b> (2yrs.) - Orchestrated 20-year chapter alumni anniversary event with Hilton Hotel and Duke univ. for largest Asian-American fraternity in the U.S. <b>TAZNs Acapella Group</b> , VP (1yr.), Treasurer (1yr.) - Spearheaded group revitalization post-Covid-19, leading events, performances and communication	