Dongkon(DK) Lee

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EDUCATION

Princeton University | Princeton NJ, USA *Expected Graduation: 06/2027*
B.S.E Candidate; Major: Electrical and Computer Engineering, Minors: Computer Science & Neuroscience

Primoris Academy |Westwood, NJ, USA *09/2019 - 06/2023*
GPA: 3.97/4.0 Unweighted (USA)

WORK & RESEARCH EXPERIENCE

Machine Learning Software Engineer Intern | Kulite Semiconductors | Leonia, NJ, USA *01/2025 - present*
Developing an end-to-end automated visual inspection system using Python and deep learning. Designed a Tkinter-based GUI interface integrating servo motors and cameras for multi-angle capture, with AWS S3 cloud storage. Engineering a transformer-based classification model using D2 to reduce manual testing time and enhance quality assessment accuracy.

Machine Learning Research Intern | Flywire at Seung Lab | Princeton University, Princeton, NJ, USA *11/2024 - present*
Working with Flywire, a groundbreaking neuroscience project mapping the Drosophila brain, under Dr. Sebastian Seung. Engineering a Reinforcement Learning agent to interface with Flywire's UI and make autonomous merge/split decisions for neuronal segments based on geometric properties of connectomes in the Drosophila brain.

Computational Neuroscience Research Intern | Bringmann Lab at BIOTEC | Dresden, Germany *06/2024 - 08/2024*
Engineered a backend pipeline for analyzing the RIS neuron, a sleep-regulating neuron discovered by the Bringmann Lab in C.elegans, under the guidance of Dr. Inka Busack. Developed data extraction and segmentation algorithms using scikit-image, numpy, pandas, and Napari, achieving 97% optimization in microscopic neural imaging analysis.

SOFTWARE AND HARDWARE PROJECTS

PuNC *10/2024-12/2024*
Built and implemented a 16-bit processor (PUnC) in Verilog for FPGA deployment, utilizing the LC3 instruction set. Designed and implemented synthesizable datapath and control unit including ALU, register file, memory interface, and program counter on Xilinx Artix-7 FPGA.

Epigenemusic *02/2024-05/2024*
A project to explore the applications of the Epigenetic effects of listening to Music within the evolving music world. Developed Python-based machine learning pipeline to analyze music diversity trends (2015-2023) using k-means clustering and PCA; extracted audio features from 900+ songs via Spotify API to quantify genre evolution; implemented data collection system for TikTok sound analysis to demonstrate increased musical diversity post-platform launch

ENTREPRENEURIAL STARTUPS

CEO & Co-Founder | UBound | Leonia, NJ**,** USA *04/2024 - present*
Co-founded and leading development of a web-based college consulting platform that connects high school students with undergraduate mentors from top universities. Architecting the full-stack solution using NextUI React Framework, Tailwind CSS, MongoDB, and Google Firebase for June 2025 release.

CEO & Co-Founder | Traverse[cs] | Westwood, NJ**,** USA *10/2022 - 06/2023*
Co-founded an educational startup, fostering engagement with over 100 students across 10 countries, broadening their exposure to diverse programming concepts with sponsorship packages from industry leaders including AoPS, Wolfram Alpha, and Repl.it and established partnerships with Andover Computing Open, CP Initiative, Teamscode

EXTRACURRICULAR ACTIVITIES

Embedded systems Engineer | Princeton Racing Electric | Princeton University, Princeton, NJ, USA *08/2024 - present*
Embedded systems engineer focusing on PRE's MK III race car's onboard protoboards. Modeled and designed on onboard circuit and pcb design using Altium, as well as using (CAD) NX to design the housing for the pcb.

Principal Clarinetist | Princeton University Orchestra | Princeton University, Princeton, NJ, USA *09/2023 - present*
Lead the Clarinet section in weekly 10-hour rehearsals, culminating in four annual recitals

Vice President | (SASE) Society of Asian Scientists and Engineers | Princeton, NJ, USA *07/2024 - present*
Vice President of Princeton's first Society of Asian Scientist and Engineers chapter, encouraging Asian-American students that are pursuing STEM fields to network at National SASE Conference

SKILLS

Programming | C, Java, Python, PyTorch, React, NextJS, JavaScript, NodeJS, HTML, Tailwind CSS, MongoDB
Languages | English (Native), Korean (Native), Mandarin (Intermediate fluency)
Design & Tools | Verilog, Altium, SolidWorks (CAD), NX (CAD), Adobe Illustrator, Final Cut Pro, Logic Pro