Dongkon(DK) Lee

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EDUCATION

Princeton University, Princeton NJ, USA *Expected Graduation: 06/2027*
B.S.E Candidate; (E.C.E) Electrical and Computer Engineering, Minors: Computer Science & Neuroscience
Relevant Coursework: *(COS 324) Introduction to Machine learning, (COS 226) Data Structures in Java, (ECE 206) Contemporary Logic Design, (MAT 201) Multivariable Calculus, (MAT 202) Linear Algebra*
Primoris Academy, Westwood, NJ, USA *09/2019 - 06/2023*
Valedictorian; GPA: *3.97/4.0 Unweighted (USA)*

RESEARCH EXPERIENCE

Computational Neuroscience Research Intern | Bringmann Lab at BIOTEC | Dresden, Germany *06/2024 - 08/2024*
Engineered a robust backend pipeline that segmented and extracted data from the RIS Neuron under Dr.Inka Busack. Optimized data analysis by 97% for microscopic C.elegan neural imaging using scikit-image, numpy, pandas, & Napari.
Bioinformatics Research Intern | Monmouth University | West Long Branch, New Jersey *09/2022 - 06/2023*
Created a machine learning model to predict enzyme function given an input string of amino acid sequences under Dr.Tsioroina Aina with peers. Utilized both Linear and Logistic Regression to achieve a test accuracy of 92% and 97%.

SOFTWARE AND HARDWARE PROJECTS

PuNC | 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
Fraud Detection | Implemented a machine learning model for credit card fraud detection using Python, featuring dimensionality reduction via clustering algorithms and an AdaBoost classifier; achieved 95% training accuracy and 90% test accuracy on data
MNIST Digit Classification | Implemented a Convolutional Neural Network (CNN) with two convolutional layers, max pooling, and three fully connected layers for MNIST digit classification using PyTorch and compared performance against baseline fully connected networks"; Achieved 97% test accuracy through optimization of network architecture

ENTREPRENEURIAL STARTUPS

CEO & Founder | UBound | Leonia, NJ, USA *04/2024 - present*
Co-founded a startup web app using NextUI React Framework, Tailwind CSS, MongoDB, and Google Firebase to facilitate connections between high school students and top university undergraduates for college application consulting. Managing full-stack development and preparing for product launch in December 2024.
CEO & Co-Founder | HeyBusking | New York, NY, USA 09/2020 - 06/2023
Co-founded a non-profit organization to support local musicians, connecting buskers to local venues to create a safe and entertaining space for live music amidst the COVID-19 pandemic.

EXTRACURRICULAR ACTIVITIES

Embedded systems Engineer | Princeton Racing Electric | Princeton University, Princeton, NJ, USA *08/2024 - present*
Embedded systems engineer working on PRE's new MK III racecar focusing 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
Front-End Web Developer | Hack4Impact | Princeton University, Princeton, NJ, USA *09/2023 - present*
Front-end web developer for a new web-app to connect high school students to local volunteering opportunities to create a positive social impact partnered with 401(c) non profit organization GoGiver.
Member | AGI Reading Group | Princeton University, Princeton, NJ, USA *06/2024 - present*
Participate in discussions on AGI(Artificial General Intelligence) research (neural networks, comp neuro, ML foundations) guided by Dr. Sebastian Seung

SKILLS

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