Chan Park

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EDUCATION

Duke University — Durham, North Carolina
Bachelor of Science - Computer Science (AI/ML) — *August 2020 - May 2024*
Minors - Economics, Philosophy — *GPA: 3.76*
Courses: Data Structures, Computer Architecture, Design & Analysis of Algorithms, Database Systems, Discrete Math, Multivariable Calculus, Graduate Data Science, Microeconomics, Probability, Linear Algebra, Artificial Intelligence, Machine Learning, Operating Systems

TECHNICAL SKILLS

- **Languages & Frameworks**: C, C#, Java, Javascript, Python, Scheme, SQL | Angular.js, Express.js, Flask, React.js, Vue.js
- **Tools & Libraries**: AWS, Blender, Figma, GCP, Git, Jenkins, Postman, Unity | Matplotlib, Pandas, PyTorch, Scikit, Three.js

WORK EXPERIENCE

- **Capital One** — Richmond, Virginia
  Software Engineering Intern — *June 2023 - August 2023*
  - Pioneered submission and search capabilities into a **Vue.js** feedback form micro-frontend by building validated API endpoints in the backend for frontend (BFF) and enterprise API layers, streamlining the feedback collection process for 16,000+ users
  - Architected **AWS OpenSearch** index to store form data and synthesized it with enterprise API endpoints in **Typescript**, integrating schema validation, pagination, and flexible query-building modules to scale and accelerate aggregation queries

- **Duke University** — Durham, North Carolina
  Research Assistant — *May 2023 - Present*
  - Optimized **hyperparameter search** for gradient descent based **assisted learning** algorithm using **AutoML** in **PyTorch**
  - Increased accuracy ~10% by tuning learning rate and gradient assisted weights with validation set and residual realignment

  Teaching Assistant — *August 2022 - May 2023*
  - Orchestrated weekly one-on-one Office Hours and conducted weekly recitations of 25+ students for courses "Data Structures and Algorithms" and "Design and Analysis of Algorithms," aiding comprehension and fostering algorithmic development

- **Cigna Health** — Bloomfield, Connecticut
  Application Developer Intern — *May 2022 - August 2022*
  - Integrated **Google Analytics** into **Angular.js** fitness app of 20,000 monthly users and created **Cloudwatch** dashboards for real-time AWS instance/database monitoring, reducing annual issues with overloaded EC2s, ELB, and RDS by 60%
  - **Multithreaded** a Python **web scraper** in BeautifulSoup translating the organization hierarchy of Cigna's 70,000 employees into a visual, with information stored in a SQLite database, amplifying performance efficiency by over 10-fold
  - Revamped Cigna's **Virtual Reality** Meditation app with a social option including multiplayer capabilities like avatar selection, hand-tracking, and cross-device object interaction with **Unity**, **C#**, Meta Avatars SDK, and Oculus Integration SDK. Presented at Cigna's booth at the Fall 2022 Grace Hopper Conference

- **BNSoft** — Seoul, South Korea
  Software Intern — *June 2021 - August 2021*
  - Determined UI/UX features for an application that facilitates building operating systems under the **AUTOSAR** model
  - Pitched Vue.js Proof of Concepts in biweekly meetings with CEO and CTO, resulting in approval for integration with application to be used in development of Hyundai automobiles

PROJECTS

- **Personal Website**: Innovated a visually immersive **Three.js** website resembling a café to introduce myself and showcase personal projects; employed Blender to personally design, mesh, and render all objects featured (December 2022 - July 2023)

- **Spotify Notion Integration**: Programmed **Notion Integration** with **Flask** backend and **SQLite** database using the **Spotify API** to, upon authentication, generate Notion databases for viewing and sorting tracks in user's playlists and recommendations based on artists, popularity, or Spotify-assigned audio features like danceability, speechiness, etc (August 2022 - July 2023)

- **Mini-Amazon**: Engineered e-commerce web app using vanilla **Javascript** frontend, Flask backend, and **PostgreSQL** database accessed by SQLAlchemy where registered users could buy and/or sell products according to inventory space, user balance, and product price (September 2022 - December 2022)

- **Proximity**: Led Agile team as Tech Lead for an **Okta-integrated** web app displaying optimal in-person workdays using coworker data. Architected backend connectivity between **DynamoDB** and **Express.js** and spearheaded API integration with React.js client. Added functional testing with Microsoft Playwright (May 2022 - August 2022)

- **Market Analyzer**: Analyzed daily open/high/low/close/volume stock market data from 100+ NASDAQ companies over past 20 years obtained with Alpha-Vantage and Yahoo Finance API's with **PCA**, **logistic regression**, and **KNN**. Models created using Python, NumPy, SciPy, Pandas, Matplotlib (July 2021 - October 2021)

- **Mindful Garden**: Created website in React.js promoting mental health with interactive features for user meditation, mood journaling, mindful breathing, and sleep scheduling. Awarded Best Hack for promoting Health & Wellness at HackDuke 2021 (October 2021)