Sean Kim

Palisades Park, NJ

(201) 937-7441 · taemin.kim0327@gmail.com · GitHub · LinkedIn

EDUCATION

Rutgers University - New Brunswick   GPA: 3.84
Bachelor of Arts - Computer Science   Expected Graduation: May 2026
- **Relevant Coursework:** DSA, Computer Architecture, Databases, Data Management, Deep Learning
- **Dean's List:** 2022-2024

EXPERIENCE

Rutgers UHACCS Hackathon | GitHub   December 2022
Participant   New Brunswick, NJ
- Developed a linear regression library in **Java** with support for data entry, finishing **4th** out of **90** participants.
- Implemented least squares approximation from scratch for line of best fit calculation on loaded datasets.

Cafe Leah   May 2023 - December 2023
Barista   Palisades Park, NJ
- Made an average of **20** bingsoo and **10** coffee per hour.
- Oversaw daily inventory management, maintaining a **100%** availability rate to match customer demand.

PROJECTS

ref:type | GITHUB | REFTYPE.APP
TypeScript, React.js, Node.js, Google Cloud SQL, Firebase
- Built a competitive typing game in **React.js** deployed on **Firebase Hosting** with a real-time leaderboard.
- Increased average typing speed of **120 users** to over 100 words per minute during a two week testing period.
- Leveraged **Firebase Cloud Functions** written in **Node.js** to update leaderboard and user profiles as scores change, ensuring consistency between clients with **sub-150ms** latency.
- Implemented a **MySQL** database on **Google Cloud SQL** to manage user data and leaderboard status.

pyesl | GITHUB
Pandas, spaCy, Firebase
- Developed a dependency parser based grammar checker with **spaCy**, featuring training pipelines for custom grammar rules and multi-language support.
- Engineered a corpus augmentation pipeline to train spaCy's dependency parser and part of speech tagger on user-defined grammar errors, increasing parser LAS by **37%** and tagger F1 score by **19%** on erroneous sentences.
- Deployed the English grammar checking model on **Firebase**, available through a **React** web interface.
- Created an ETL pipeline with **Pandas** to identify the top grammar mistakes made by over **300** ESL students.

pycaptcha | GITHUB
OpenCV, PyTorch, Pandas, NumPy, Matplotlib
- Developed a CAPTCHA system with object detection using YOLOv4-tiny fine-tuned on a **12,000** image dataset.
- Engineered a dataset augmentation pipeline with **NumPy** and **Matplotlib**, reducing average loss to **0.06**.
- Built a post-processing pipeline with **Pandas** to discard images with false detections, resulting in a **13%** increase in precision on tested images compared to the pretrained model.

TECHNICAL SKILLS

- **Languages:** Java, Python, TypeScript, JavaScript, C, SQL
- **Libraries:** React.js, Tailwind CSS, PyTorch, OpenCV, NumPy, Pandas, Matplotlib
- **Frameworks and Tools:** Node.js, Express.js, Git, Firebase, Jupyter Notebook