Seonghyun Park

Emeryville, CA|+1 (323) 518-7474 |spark6015@berkeley.edu
http://www.linkedin.com/in/seonghyun-park-704957237| https://spark0615.github.io/seonghyun_park.github.io

EDUCATION

University of California, Berkeley Bachelor of Arts in Computer Science
- Cumulative GPA: 3.7/4.0 Graduated: December 2024
- Relevant Coursework:
  - Deep Learning & Neural Networks
  - Operating Systems & System Programming
  - Computer Vision
  - Data Structures
  - Database Systems
  - Computer Graphics & Imaging

PROFESSIONAL EXPERIENCE

Software Engineer *(Python, C#, React, Google Cloud, Docker, Android, WebGL, Scenic)* May 2024 - Present
DOP Center Berkeley, California
- Collaborated with UCSF and Stanford medical schools to launch Mixed Reality (MR) stroke rehabilitation research
- Developed an LLM agent to auto-generate Scenic training scenario programs from clinician annotations for patient exercise scenarios
- Containerized Scenic and Python scripts with Docker, deploying on Google Cloud Run to automate scenario generation
- Built real-time simulation and data pipelines from Meta Quest 3 to Google Cloud for patient analysis
- Implemented features: training scenarios, trajectory recording, Dynamic Time Warping data processing, and ZeroMQ network pipeline for patient data transmission
- Led a team of 8 to deliver an MR stroke rehabilitation app for Meta Quest 3 with integrated simulation and data systems

Software Engineering Intern *(Python, Javascript, Django, PostgreSQL, HTML/CSS)* May 2023 - Aug 2023
OrangeShine Cerritos, California
- Optimized database access with prefetching and indexing in Python/Django, boosting page response times by 40% and cutting server load by 30%
- Developed 5+ Django web applications with REST APIs, enabling vendors to manage shipment box sizes with data validation and cloud-synced PostgreSQL storage
- Upgraded Python and Django across 10+ company applications, modifying codebases for compatibility, security, and performance enhancements

Software Engineering Intern *(React, Javascript, HTML/CSS)* Aug 2022 - Nov 2022
Boram Remote
- Developed a responsive design framework with Bootstrap, improving cross-platform compatibility and performance on desktop, mobile, and tablet
- Enhanced website accessibility with React optimizations, increasing user satisfaction by 25% per internal metrics
- Delivered a well-received site using JavaScript and CSS, boosting company online presence

RELEVANT EXPERIENCE

Stanford Hackathon 1st Place, Meta & Ramen VR Track Nov 2024
Stanford Immerse the Bay Stanford, CA
- Built a Mixed Reality entertainment application by integrating multiplayer and colocation, enabling users to interact with each other in the same physical space by sharing their room and location.

Course Instructor & Course Staff Aug 2023 - Dec 2024
University of California, Berkeley Berkeley, CA
- Designed and taught XR Development (CS198) and core CS courses (CS61B: Data Structures, CS61C: Machine Structures)
- Delivered lectures and assessed student projects for 300+ undergrads

PROJECT EXPERIENCE

Diffusion Models on MNIST Dec 2024
- Built a UNet architecture to train a single-step denoising model on MNIST, optimizing L2 loss with Adam
- Achieved denoised outputs across varying noise levels in a single step
- Extended UNet into a DDPM-based diffusion model with scalar time-conditioning and exponential learning rate decay

SKILLS

TECHNICAL SKILLS: Python, Java, C++, C, Swift, Go, Assembly, JavaScript, C#, SQL, HTML, CSS, Django, React, Spring, Git, Docker, Unity, Google Cloud, AWS, MongoDB, Unix, Linux, Kernel Programming