Seonghyun Park

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EDUCATION

University of California, Berkeley — Berkeley, CA
Bachelor of Arts — Expected Graduation: May 2025
Major in Computer Science — Cumulative GPA: 3.72/4.00
Continuing as Master of Science in Computer Science — Expected Graduation: May 2026
Relevant Coursework: Deep Neural Network, Computer Vision, Operating Systems and System Programming, Internet: Architecture and Protocols, Data Structures, Database Management Systems, Linux System Administration, Machine Structures, Computer Graphics and Imaging, Extended Reality Development

Teaching: Academic Intern/Tutor (CS61B/CS61C) and Course Instructor (CS198-080)

PROFESSIONAL EXPERIENCE

Lead Undergraduate Researcher *(Python, C#, Unity, Scenic)* — May 2024 - Present
EECS DOP Center at UC Berkeley (*Advised by Prof. Sanjit Seshia, Postdoc Edward Kim)* — Berkeley, California
- Conducted research and development on Mixed Reality Stroke Rehabilitation in collaboration with UCSF and Stanford
- Led a team of 8 undergraduates to develop a comprehensive MR stroke rehabilitation application for Meta Quest 3
- Implemented key features, including creating training scenarios, recording trajectory points, processing data with Dynamic Time Warping, and building a network pipeline to transmit patient data and task information to a server using ZMQ
- Designed and implemented personalized algorithms tailored to patients' range of motion, creating progressively challenging tasks that adapted as patients succeeded
- Conducted thorough literature reviews to foster innovation and avoid redundancy in the development process

Undergraduate Research Assistant *(Python)* — Jan 2024 - June 2024
Lawrence Berkeley National Laboratory (*Advised by Dr. Waqas Khalid)* — Berkeley, California
- Played a pivotal role in designing an e-beam lithography using nanotube focused on cost-effective and improved efficiency
- Advanced a lithography simulator, incorporating pathfinding algorithms that increased operational speed by 30%
- Tested and evaluated the performance of shooting electrons through nanotubes using a motor capable of micrometer precision, enhancing accuracy by fine-tuning the motor's positioning

Augmented Reality Development Extern *(Javascript, Lens Studio)* — Mar 2024 - April 2024
Snap Inc. — Remote
- Collaborated with the AR development team to develop an AR Lens for Snap Inc. using Snap's Lens Studio Software
- Conducted data-driven market analysis (Entertainment, Sports, Tech) to uncover and develop impactful AR experiences
- Tested and optimized AR experiences to ensure optimal performance across different devices and platforms

Software Engineering Intern *(Python, Javascript, Django, PostgreSQL, HTML/CSS)* — May 2023 - Aug 2023
OrangeShine — Cerritos, California
- Implemented prefetching and indexing in Python, Django to optimize database access, leading to up to 40% improvement in page response times on certain web pages and significantly reducing server load
- Developed 5+ Django-based web application using REST APIs for vendors to manage and edit shipment box sizes with integrated data validation, capturing user inputs and syncing them with a cloud-based SQL database
- Played a major role in upgrading Python and Django affected 10+ company applications, involving modifications to existing codebases, ensuring alignment with the latest software versions for improved security and performance

Software Engineering Intern *(React, HTML/CSS)* — Aug 2022 - Nov 2022
Boram Cooperation — Remote
- Implemented and developed a responsive design framework using Bootstrap, optimizing cross-platform compatibility and performance across desktop, mobile, and tablet devices, thereby enhancing user accessibility and interaction
- Enhanced website accessibility and performance, resulting in a 25% increase in user satisfaction based on internal reviews
- The resulting website was well-received by the staff, enhancing the company's online presence and accessibility

ADDITIONAL SKILLS

Programming Languages: Python, Java, C++, C, Swift, Go, Assembly, HTML/CSS, JavaScript, SQL, C#, Scenic
Technologies/Frameworks: Django, React, Unix, Linux, RISC-V, Git, Docker, Kernel, AWS, Spring, MongoDB, Unity, PostgreSQL