

ROY S. CHOI

323-430-1911 | rschoi@usc.edu | Open to relocate | [linkedin.com/in/roy-choi-9a839924a](https://www.linkedin.com/in/roy-choi-9a839924a) | github.com/IARPUS

EDUCATION

University of Southern California

Bachelor of Science in Computer Science (B.S.)

Aug. 2022 – May 2025

GPA: 3.62

TECHNICAL SKILLS

- **Languages:** C++, C, Java, Python, JavaScript, Golang, HTML, CSS
- **Tools/Frameworks:** React.js, Next.js, Node.js, Express.js, Tesseract, Selenium, REST, Spring Boot, MongoDB (NoSQL), MySQL/PostgreSQL (RDBMS), Flask, Git, Github, VScode, AWS, Valgrind, Docker, Atlassian (Jira, Confluence), Swaggerhub, Linux, Unix
- **Concepts:** SDLC, REST API, Microservices, Cloud Computing, Test Driven Development (TDD), Waterfall & Agile/Scrum, Software Architecture, Process Analysis (ps aux, top, htop), Test Automation

EXPERIENCE

Software Engineering Intern

Oct. 2023 – Jan. 2024

Seekeats

Los Angeles, CA

- Translated user requirements into technical specifications and implemented up to 7 cross-platform microservices in React Native
- Enhanced application responsiveness by restructuring component architecture, reducing load times by 40%
- Optimized media asset loading by integrating lazy loading for images and videos, contributing to reduction of load time
- Led the migration of legacy components to optimized versions using Expo Go and React Native, which enhanced cross-platform compatibility and helped expanded the app's user base by 25%

Full-Stack Software Engineering Intern

May 2024 – Jul. 2024

Kintsugi Global

Los Angeles, CA

- Implemented cloud computing solutions with Amazon S3 for scalable storage, enhancing data accessibility and reliability while reducing storage costs by 10%
- Proposed and implemented Tesseract.js (Optical Character Recognition ML model) to parse text within images and using that text to play certain sound effects with Howler.js
- Developed and implemented a comprehensive suite of automated tests using Jest, achieving 95% code line and 85% branch coverage across React components and Express.js microservices, significantly enhancing code reliability and maintainability
- Coordinated with DevOps and QA teams to ensure that Swaggerhub API documentation was aligned with deployment and testing processes

PROJECTS

Monte Carlo Simulation

Dec. 2024

- Partnered with Siemens Digital and USC engineers to implement Monte Carlo predictive analytics in Python/Flask to forecast financial outcomes, integrating MongoDB for data storage.
- Designed and implemented interactive data visualizations for the Monte Carlo simulation using React.js and React Graphs, enabling clear and insightful analysis of financial forecasts that enhanced stakeholder understanding
- Presented the Monte Carlo simulation project to the board of VPs at Siemens Digital, effectively demonstrating its applications in financial forecasting and decision-making, which secured executive support for project expansion

National Park Display Application

Jan. 2024

- Developed an end-to-end solution using Spring Boot (Java) backend and React front-end for an interactive, geo-based park exploration feature.
- Performed Javascript unit tests with Jest and Java unit tests with JUnit with 95% line coverage and 85% branch coverage.
- Integrated PostgreSQL for efficient storage and retrieval of user data objects

Bank Statement Analyzer

Jan. 2025

- Designed and developed interactive dashboards using React Graphs and within the Next.js frontend, presenting complex financial data through clear and actionable graphs and charts
- Created microservices to parse PDF bank statements using OCR models with Tesseract and serve file data using a Golang backend as a proxy
- Incorporated OpenAI models (GPT 4o and GPT 4o mini) to provide advanced financial analysis and insights from the Tesseract parsed bank statements, enabling bank analysts to make data-driven decisions faster
- Developed an internal file system to manage and display bank statement files stored in AWS S3, streamlining file access and improving data organization for bank analysts.