# Junichi Koizumi

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## EDUCATION

**Bachelor of Science, Computer Science**

Arizona State University – Tempe, AZ

*Courses*: Data Structure & Algorithms, Object Oriented Programming, Web Development, Distributed Systems, Operating Systems , Foundation of Machine Learning, Database Management

*Awards:* GCSP Research Stipend

## EXPERIENCE

**Favoland AI** **May 2024 – December 2024**

**Software Engineering Intern**

Tempe, AZ

• Improved accuracy by **25%** and consistency by **22%** in the AI model responses for Claude 3.5 Sonnet and GPT-4 when evaluating the **55,000** unique ingredients, addressing hallucination.

• Implemented context caching mechanism for Gemini models, reducing API costs by **40%** and improving response times by **32%**.

**Arizona State University** **May 2024 - Present**

**Undergraduate Researcher**

Tempe, AZ

• Led a large scale survey (N=400) on AI fairness perceptions, employing t-tests, ANOVA, and effect size estimation to uncover demographic parities in procedural justice perceptions across hiring and education.

## PERSONAL PROJECTS

**Simple Compiler** | *C++*

- Designed a C++ compiler supporting nested control structures (if, while, switch, for), utilizing recursive descent parsing and pointer manipulation, validated by 66 test cases.
- Developed an intermediate code generator with linked list architecture and dynamic memory management, translating high-level constructs into optimized three-address code.

**Restaurant Booker** | *Spring Boot* | *PostgreSQL*

- Developed full-stack restaurant booking application using Spring Boot with MVC architecture, implementing user authentication and real-time reservation management.
- Engineered backend data management with PostgreSQL, optimizing search and update functionalities.

**Dynamic Script Runner** | *AWS* | *DynamoDB*

- Reduced manual input and improved operational efficiency for uploading scripts by designing an automated process utilizing event-driven architecture in DynmoDB for seamless EC2 script activation.
- Accelerated validation speeds by **30%** to improve application efficiency and user satisfaction by creating an AWS Lambda function for user input processing and data validation and monitoring metrics with CloudWatch.

## TECHNICAL SKILLS

- Languages: Java, Python, JavaScript, HTML, CSS, SQL, C#, C++, .NET
- Frameworks/Libraries: React.js, Spring Boot, Node.JS, PostgreSQL, Apache Spark
- Applications: AWS, Git, Linux, Docker