

Toe Arkar

Atlanta, GA, United States

GitHub: <https://github.com/Toe12>

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Education

Bachelor of Science in Computer Science

Webster University, Saint Louis, MO | October 2016 – August 2020

Minor: Mathematics

GPA: 3.58

Personal Project

Insurmate.app: Blockchain-Based Insurance Policy Management

- Leading the development of a private blockchain solution using Hyperledger Fabric to enable secure and transparent policy management and exchange in the insurance industry.
 - Mentoring University of Nebraska Omaha (UNO) students in blockchain implementation and web development, sponsoring a capstone team for two consecutive semesters.
 - Developed a full-stack Minimum Viable Product (MVP) using the MERN stack (MongoDB, Express, React, Node.js) and integrated it with blockchain for policy management.
 - Exploring Ollama LLMs for fraud detection, policy verification, and automation in insurance processing, leveraging ontology and the semantic web to enhance decision-making and compliance.
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Professional Experience

Founding Software Engineer

We Care Insurance, Inc. | Omaha, NE, USA | October 2022 – Present

Technical Advisor

Cristian Mateos, PhD (ORCID: 0000-0001-5761-1898)

- Designed and implemented a scalable cloud-based architecture on Oracle Cloud Infrastructure (OCI), optimizing system performance and cost efficiency through cloud-native solutions.
- Modernized front-end development by migrating JavaScript and jQuery to React, enhancing user interface responsiveness, interactivity, and overall user experience.

- Integrated Redis caching to improve data retrieval efficiency and RabbitMQ messaging to facilitate asynchronous processing, enhancing system reliability and scalability.
- Provided technical mentorship, guiding interns in software development best practices and fostering a collaborative learning environment.
- Engaged in strategic decision-making, collaborating with industry experts to refine system design and optimize performance in alignment with best practices in scalable computing.

Software Engineer

We Care Insurance, Inc. | Omaha, NE, USA | April 2021 - September 2022

Technical Advisor

Cristian Mateos, PhD (ORCID: 0000-0001-5761-1898)

- Developed full-stack web applications with a Spring Boot backend and a JavaScript/jQuery frontend, integrating Axios to facilitate efficient client-server communication.
- Enhanced backend performance by transitioning from JDBC to JPA Hibernate, optimizing database interaction, and implementing transaction management for improved data consistency.
- Conducted unit and integration testing utilizing JUnit, Mockito, MockMvc, and TestContainers, adhering to a Behavior-Driven Development (BDD) approach to ensure software reliability.
- Performed API manual and performance testing using Postman, validating request-response behavior, ensuring API efficiency, and optimizing system performance.
- Implemented role-based access control (RBAC) and security policies using Spring Security, strengthening system security and user authentication mechanisms.
- Automated deployment workflows through Docker and GitHub Actions, streamlining the CI/CD pipeline for efficient software delivery and version control.

Software Engineer Intern

We Care Insurance, Inc. | Omaha, NE, USA | September 2020 - March 2021

- Designed and optimized SQL database schemas to improve data storage efficiency, retrieval speed, and overall database performance.
- Developed and implemented API integrations for vehicle identification number (VIN) validation, address verification, and document management, leveraging Amazon S3 for secure and scalable storage solutions.
- Enhanced web application functionality by integrating JDBC, XML, and JavaMail, improving data handling, usability, and system performance.

Database Developer Intern

Forkaia | Irvine, CA, USA | June 2019 - August 2019

- Collaborated with research teams to develop data models and optimize relational databases.
- Normalized database structures to Fourth Normal Form (4NF) to ensure data integrity.
- Created Entity-Relationship (ER) models, database triggers, indexes, views, and queries to streamline operations.
- Built a Python-based database management system for research and analysis applications.

Technical Skills

Programming Languages

- Java, JavaScript

Frameworks & Libraries

- Front-End: React, Bootstrap, Astro, jQuery
- Back-End: Express.js, Mongoose, Spring Boot, Spring Data JPA
- Blockchain: Hyperledger Fabric
- Testing: Mockito, JUnit, MockMVC, Jest, Testcontainers

Databases

- MongoDB, MySQL, Redis

Cloud & Infrastructure

- Oracle Cloud Infrastructure (OCI), AWS S3, Docker, RabbitMQ

Security & Access Control

- Spring Security, Role-Based Access Control (RBAC)

Software & Tools

- GitHub, Bitbucket, Jira, Postman
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