

Zeeshan Ahmed

Software Engineer. Experienced in Agile-driven Fullstack Web Development and Database Modeling. Python, React, SQL.

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EXPERIENCE

VIDIUM ANIMAL HEALTH | SOFTWARE ENGINEER

Jan 2022 - present | Scottsdale AZ, USA

- Designed and developed the Knowledgebase, a MySQL database deployed on AWS RDS, with curated data of over 6000 canine biomarkers
- Created a web application for Knowledgebase, using React, Node, and Express to streamline data querying and analysis for genomic scientists
- Developed VariantDB, a large-scale genetic mutation database for canine cancer research containing data about over 12000 genetic mutations
- Deployed a full stack web application to interface VariantDB, and facilitate querying and data analysis, using Django, MySQL and JavaScript
- Implemented complex stored procedures and SQL views for VariantDB, to facilitate data querying to support the clinical reporting process
- Automated order pipeline in Salesforce and integrated with an external Lab Information System API to track 1000s of orders per month

IIHR, THE UNIVERSITY OF IOWA | GRADUATE RESEARCH ASSISTANT

May 2021 - December 2021 | Iowa City IA, USA

- Developed a JavaScript library for Water Information System, allowing users to build their customized water information systems
- Optimized the codebase with modular components for map and core services
- Implemented map engine switching by integration with Mapbox and Leaflet
- Designed and implemented an offline mode feature for the Iowa Flood Information System to improve user experience
- Implemented lazy loading of javascript resources, reducing page load-time by nearly 20%

PROJECTS

SCIENCE ALLIANCE PORTAL | SOFTWARE ENGINEERING PROJECT, SPRING 21'

- Developed a web application using Django and MySQL, to facilitate Iowa Bioscience Academy in recruiting/managing the Science Alliance members
- Developed an event management system to invite/sign up members for the events
- Designed and developed the Login and Sign up web pages, as well as the front-end UI of the landing page and dashboard

CAR SHOWCASE | PERSONAL PROJECT

- Developed a web app, in Nextjs 13 and Tailwind CSS, to showcase latest cars from different manufacturers and models
- Users can search for a particular car make/model and look up car details
- Added functionality to filter cars based on fuel type and car manufacturer year
- Integrated the application with an external API from RapidAPI to fetch car details
- Added HeadlessUI to the project for a seamless user interface

PUBLICATIONS

- **PHOENIX: Device-Centric Cellular Network Protocol Monitoring using Runtime Verification (NDSS '21)** Mitziu Echeverria, **Zeeshan Ahmed**, Bincheng Wang, M. Fareed Arif, Syed Rafiul Hussain, Omar Chowdhury

SKILLS

PROGRAMMING

Proficient:

Python • Apex • Ruby • SQL • Java • Bash • MATLAB • HTML • CSS • JavaScript • TypeScript

Experienced:

C++ • C • Perl • LaTeX • R • PHP

Familiar:

Assembly • Rust • C# • Go

LIBRARIES & FRAMEWORKS

Django • React • NextJS • Flask • Svelte • Ruby on Rails • AstroJS • NodeJS • Express • Tailwind • jQuery • Material UI • Bootstrap

TOOLS & PLATFORMS

Git • MySQL • PostgreSQL • MongoDB • Prisma • Apache • Nginx • Jest • Selenium • LangChain • Docker • Jenkins • Auth0 • AWS • Firebase • Linux • Visual Studio

TECHNICAL STRENGTHS

Web Development • REST API Development • Automated Testing • Data Analysis • CI/CD Pipeline • Machine Learning • Cloud Computing

EDUCATION

UNIVERSITY OF IOWA

MASTER OF COMPUTER SCIENCE

Jan 2020 - December 2021 | Iowa City, IA

Topics: Software Engineering, Machine Learning, Cloud Computing, Algorithms

UNIVERSITY OF ENGINEERING AND TECHNOLOGY

BACHELOR'S IN ELECTRICAL

ENGINEERING

Aug 2013 - May 2017 | Lahore, Pakistan