

# Zeeshan Ahmed

Software Engineer. Experienced with Full Stack Web Development

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## EXPERIENCE

### VIDIUM ANIMAL HEALTH, A TGEN SUBSIDIARY | SOFTWARE ENGINEER

Jan 2022 - present | Arizona, USA

- Developed and maintained VariantDB, a large-scale genetic mutation database for canine cancer research
- Deployed a full stack web application to interface VariantDB, and facilitate querying and data analysis, using Django, JavaScript and MySQL
- Developed DeerMouse, an inter-species protein alignment web app, to visualize protein sequence differences between humans and dogs
- Optimized DeerMouse, resulting in a 60% reduction in report generation time
- Developed commercial order forms with Formstack and Lightning Web Component to provide a seamless user experience, converting potential leads into sales
- Automated sales pipeline in Salesforce and integrated with an external Lab Information System to track 1000s of orders per month
- Developed the Knowledgebase, a database with curated data on nearly 3K genetic variants and their actionability evidence
- Developed a full stack web-app for Knowledgebase to provide data for reporting

### IIHR, THE UNIVERSITY OF IOWA | WEB DEVELOPER

May 2021 - December 2021 | Iowa, 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, UI panels, and core services
- 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 & RESEARCH

### SCIENCE ALLIANCE PORTAL | SOFTWARE ENGINEERING PROJECT, SPRING 21'

- Developed a web application using Django and PostgreSQL, 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

### DISASTER ASSISTANCE MANAGEMENT SYSTEM | FUNDAMENTALS OF SWE, SPRING 21'

- Developed a request-response based web application to help users manage resources in disasters, using React, Node.js, and MySQL
- Introduced a request feature that enables disaster victims to solicit resources from nearby donors through the web application.
- Designed and developed the Login and Sign up web pages, as well as the UI/UX for the web application

## 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 • SQL • Bash •  
MATLAB • HTML • CSS •  
JavaScript • TypeScript

Experienced:

C++ • C • Java • L<sup>A</sup>T<sub>E</sub>X • Go • R

Familiar:

Assembly • Rust • PHP • YAML

### LIBRARIES & FRAMEWORKS

React.js • Next.js • Ruby on  
Rails • jQuery • Node.js •  
AngularJS • Ajax • Stripes

### TOOLS & PLATFORMS

Git • TensorFlow • PyTorch •  
SciKit • Docker • Selenium •  
Android Studio • AWS • Google  
Cloud Platform • Hibernate  
ORM

### TECHNICAL STRENGTHS

Full Stack Web Development •  
Database Modeling •  
Salesforce Development •  
CI/CD • Machine learning •  
Scripting & Automation • 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