

MEHUL SHINDE

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EDUCATION

BS Iowa State University, Computer Engineering. May 2019

RESEARCH EXPERIENCE

Undergraduate Research Assistant, Iowa State University, Ames, IA. 2018

Advisor: Dr. Arun Somani

- Developed a solution framework to enable lineage aware data management.
- Used Big Data tools including Spark, MapReduce and Ceph.
- Researched the application of different clustering algorithms.
- Used gem5 as a simulation platform.

Undergraduate Research Assistant, Iowa State University, Ames, IA. 2017

Advisor: Dr. Caroline Krejci

- Developed and deployed a mobile application that helped participants of local food hub network to track products in delivery from producers.
- Wrote back-end script to handle data generated by the app in real time in google apps script.
- Wrote an algorithm to generate node to node routing of the flow of products in a supply chain from available data.
- Co-authored a journal article (manuscript under preparation, to be submitted to International Journal of Physical Distribution & Logistics Management).
- Used technologies such as GoogleAppsScript, ArcGIS and JavaScript.

TEACHING EXPERIENCE

Iowa State University, Ames, IA

Teaching Assistant, Electrical and Computer Engineering Jan 2018 - May 2018

- Taught Lab sections of CprE 281- Digital Logics. Troubleshoot and Debugged Verilog and CAD programs and logic circuits.
- Instructed the use of CAD tools such as QuartusPrime and other tools such as Verilog and VHDL.

Tutor, Academic Success Center Jan 2016 - May 2017

- Tutored COMS 227: Introduction to Object Oriented Programming and MATH 166: Application of Integration to multiple tutoring groups.

PRESENTATIONS AND INVITED LECTURES

Grudens-Schuck, N.; Abu, U.; Li, E.; Shinde, M.; Schulte Moore, L. (2017). People in Ecosystems/Watershed Integration. Iowa Association of Agricultural Educators Summer Conference, Des Moines Area Community College, Ankeny, IA. June 29.

Mittal, A.; White, V. M.; Shinde, M.; Grimm, J.; Krejci, C. C. (2017). Iowa Food Hub Collaboration Network. At the Iowa & Michigan Food Hub Managers Working Group Meeting. May 9 - 10. West Union, IA.

AWARDS AND HONORS

Cardinal Key Honor 2019, Iowa State University: Was awarded the highest honor at Iowa State University based upon demonstrated accomplishments in leadership, scholarship, service, and character.

College of Engineering Dean's List Fall 2018, Iowa State University: Was named to the College of Engineering Dean's List in recognition of a superior academic performance in Fall 2018.

WORK EXPERIENCE

Software Development Intern- Copart Inc.

Aug – Dec 2019.

Dallas, TX.

- Developed back-end Java and Spring application for the Accounting and Revenue department.
- Designed and implemented a proof-of-concept for Batch Data Flow system using various message brokers and Spring Cloud Data Flow
- The new Batch Data Flow system reduced the number of request queues from around 200 to 1
- Participated in the Research and Development of technologies used in the new Accounting and Revenue system.

Technologies used: Java, Spring, Maven, Apache Kafka, RabbitMQ, H2, JDBC, SQL, JIRA

Application Developer –Veterinary Medicine, Iowa State University

Jan-May 2019.

Ames, IA.

- Developed and deployed a cross-platform mobile app for Canine Anatomy students
- Implemented file caching and storage system to cache files and interactive modules to reduce 80% API calls.
- Implemented a document viewer compatible with file formats in Android and iOS environment.
- Programmed a streaming mechanism for tutorial and lecture video streaming.

Technologies used: JavaScript, AngularJS, Ionic, NodeJS, HTML, AJAX, JQuery

Information Technology Intern- FBL Financials Inc.

Aug – Dec 2018.

West Des Moines, IA.

- Developed and deployed a client facing cross-platform mobile application in an Agile based team setting.
- Programmed and tested backend services for the app that was going to be used by client/members of FBFS.
- Implemented security check procedures in the account authentication part of the mobile app.
- Implemented a server-side caching system that reduced 90% API calls per day
- Learned about software-development in corporate environment from various professionals at the company.
- Attended Innovation team meetings and proof-of-concept demos in the company.

*Technologies used: JavaScript, AngularJS, C#, .NET, Ionic, NodeJS***Software Development Intern- RenterGate**

May – Aug 2018.

Ames, IA.

- Developed a rental-property management software following Agile practices in for of a web application.
- Programmed announcement sorting feature that would sort users as desired by the admin to publish an announcement to.
- Designed and implemented a message chat feature in the tenant and landlord portal.

*Technologies used: JavaScript, NodeJS, Polymer, HTML, CSS, Firebase***Android Developer- Agronomy Department, Iowa State University**

Aug – Dec 2017.

Ames, IA.

- Developed and deployed an android application, SmartFarmer, used by farmers to track the expenses and decide the rate of their crops. The app also collects data of farmers using the app which is used for research in the department.
- Followed Agile and Test-Driven Development practices in a tam environment while developing the application.
- Designed and developed local and remote sets of SQL databases, which records data and calculates prices even when offline.
- Wrote a RESTful service for the app to communicate with Apache Tomcat server hosted on AWS.

*Technologies used: Java, SQL, SQLite***Software Development Intern- LESEM Lab, Iowa State University**

May – Aug 2017.

Ames, IA.

- Developed and deployed a version 3.0 of 'PEWI' an open source simulation web application for watershed management.
- Designed and programmed a file integration feature to make files from outdated versions compatible with latest version using file manipulation of type JSON and CSV.
- Implemented a report generation function which produced a customizable report for the users of the simulation as a printable pdf.

Technologies used: JavaScript, HTML, CSS, JSON

PROJECTS

Drone Simulator Fall'18 (Team Lead): Team lead for development of a drone simulator web-application using ROS, Gazebo, ReactJS and C++.

Data base handling script for a food hub in Michigan: Wrote back-end script to automate order list and customer information management using Google Apps Script for Sprout (a food hub in Michigan), which saves about 2 hours of the managers' time for every order cycle.

Android Game development (Honorable mention): Developed a multiplayer 2d android game in a team of 4 as a part of software development project course. Acted as the Technical Lead of the team. Used Java, XML, libGDX, PHP and MySQL to handle server client connections, database and game play.

Command line in chat box, HackISU Fall'16 (Winners): Used GForge API to implement a command line feature to perform any operations which could be done on the UI.

COMMUNITY INVOLVEMENT

President

Indian Students' Association, Iowa State University, Ames, IA.

Event Coordinator

International Student Council, Iowa State University, Ames, IA.

Participant

IEEE Iowa State University Chapter, Iowa State University, Ames, IA.

SKILLS

Operating Systems

Linux, Windows, & ROS.

Web

JavaScript, HTML, XML, CSS, Node, Angular, React, & Polymer.

Programming Languages

Java, Python, C, C#, SQL, &.NET.

Programming Languages

Spring, Apache Kafka, RabbitMQ,

Mobile Development

Android, Ionic & iOS.

Version Control

Git, & Subversion.

Big Data

Apache Spark, Ceph & Pig.

Simulation tool

Gem5.

REFERENCES

Dr. Arun Somani, Associate Dean for Research, College of Engineering
Distinguished Professor of Elect. & Comp. Eng.
Philip and Virginia Sproul Professor
Electrical and Computer Engineering
Iowa State University
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Dr. Caroline C. Krejci, Assistant Professor
Industrial and Manufacturing Systems Engineering
The University of Texas Arlington
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Dr. Lisa Schulte Moore, Professor
Natural Resource Ecology and Management
Iowa State University
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