

# Heet Dave

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## EDUCATION

### M.S. in Computer Science

Arizona State University, USA

Aug. 2019 - Exp. May 2021

GPA: 3.89

**Coursework:** AI, Data Visualization, DBMS Implementation, Sementic Web Mining, Compiler Design

### B.Tech in Information and Communication Technology

Dhirubhai Ambani Institute of Information and Communication Technology

Aug. 2014 - May 2018

(DA-IICT), India

## TECHNICAL SKILLS

**Languages** C++, Javascript, Python, Java, C#

**Frameworks** React, Redux, SpringBoot, NodeJS, ASP.NET WebAPI

**Web Tech** AWS, CloudFoundry, CaaS, DBaaS, PostgreSQL, MongoDB, MSSQL, MySQL, Socket.io, d3.js, jQuery

**Tools** Docker, Jenkins, GitLabCI, Apache Airflow, Dagster, Git

## PROFESSIONAL EXPERIENCE

### Intel Corporation, Chandler, AZ

Sept. 2020 - Present

Software Engineering Intern

- Took leadership in developing **Software Architecture** of Machine Learning based defect detection system for chip manufacturing tools. Used **cloud servers and database service** to ensure high availability while reducing storage needs by 98%.
- Developed **front-end** of the WebApp from scratch using **React/Redux** to display information about defects including interactive charts which offers better user experience.
- Created **CI/CD pipeline** using GitLabCI which streamlined deployment process. Implemented **Data pipeline** using Dagster tool which increased reliability of data pulls and allowed faster debugging.
- Researched various time-series prediction algorithms to detect defects in manufacturing tools.

### Apollo Education Group, Phoenix, AZ

Jun. 2020 - Aug. 2020

Software Engineering Intern (Data Engineering)

- Created an **ETL pipeline** to process students and course data generated by Blackboard using **Python** and **AWS Glue** which involved use of **microservices, DynamoDB and S3**.
- Created another ETL pipeline using **AWS Athena** for data generated by Blackboard in AWS S3. Leveraged partitioning in AWS Athena which reduced the data retrieval time significantly. Used **Apache Airflow** for scheduling jobs.

### Endurance International Group, Bangalore, India

Dec. 2018 - Jul. 2019

Software Engineer (Front-end)

- Developed **front-end** of Billing Engine using **ReactJS/Redux** for 13K+ re-sellers which eliminated need for 3rd party billing tool.
- Implemented caching-like technique in search and filter functionality which reduced calls to back-end significantly.

### Fintech Global Center, India

May. 2018 - Dec. 2018

Software Engineer (Full-stack)

- Developed administrative web applications using **ASP.NET WebAPI, Javascript/jQuery and MSSQL** to view/filter/export trading data, manage users/access and software distribution for the new trading platform targeted for financial institutions of Asia.
- Setup Continuous Integration (CI) using **Jenkins** which streamlined the deployment process increasing the efficiency of DevOps.
- Created SFTP (SSH File Transfer Protocol) client using **C++** to send trading data securely to the client's server.

### Indian Space Research Organisation (ISRO), India

Jan. 2018 - May. 2018

Intern

- Automated SRS document checking process by developing **Natural Language Processing** and **Neural Network** based tool using **Python** and **NLTK**. Used probabilistic N-gram language model and Part-of-Speech tagging to generate input features.

## PROJECTS

### Nuclear Plant Radiation Visualization

Oct. 2020 - Dec. 2020

- Created different visualizations (Choropleth, Bar chart, Circular Heat chart and Line chart) using **d3.js** to display radiation effects due to earthquake near nuclear plant. The viz helped get insights on data such as sensor requirements and most affected areas.

### Real-time chat application

Jan. 2021

- Created a real-time chat app with room-chat functionality using **Socket.io**. Implemented front-end using **ReactJS** and used **Nodejs** and **MongoDB** for back-end and database.

### Mini-Compiler

Aug. 2019 - Dec. 2019

- Created a compiler using **C++** which parses input program according to particular grammar, stores it using appropriate data structures and executes it while also considering scoping.