

Dhruv Malhotra

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EDUCATION

- Arizona State University** Tempe, United States
• *Master of Science in Computer Science; GPA: 4.00*
Courses: Mobile Computing, Distributed Databases, Statistical Machine learning, Software Security, Algorithms, Cloud Computing
Jan 2021 - Present
- Birla Institute of Technology** Mesra, India
• *Bachelors of Engineering in Information Technology; GPA: 8.00/10.00*
Courses: Operating Systems, Data Structures, Analysis Of Algorithms, Databases, Core Java
Aug 2012 - June 2016

SKILLS SUMMARY

- **Languages (Experienced in):** JAVA, C, SQL
- **Languages (Familiar with):** C++, Python, JavaScript, HTML, CSS
- **Libraries and Frameworks:** Spring, Spring Boot, J2EE, Struts, RESTful API, MVC, Spark, Hadoop, AngularJS
- **Tools and Platforms:** AWS, Docker, Kubernetes, Terraform, Git, Jira, GCP, Linux, CI/CD, Unit testing
- **Databases:** MySQL, SQLite, PostgreSQL, MongoDB, DynamoDB, Redis

EXPERIENCE

- University Technology Office, Arizona State University** Tempe, USA
• *Part-time ERP Integrations Engineer*
Feb 2021 – Present
 - **Peoplesoft APIs Integration:** Involved in end-to-end development of APIs that **generate 11 reports daily** to sync ASU financial data with **Workday**. This integration reduced the information gap between stakeholders and enabled transparency by enabling **two new financial dashboards**. (Java, Mulesoft, Kubernetes, Jenkins, AWS)
- Freecharge** Gurgaon, India
• *Software Development Engineer*
Dec 2018 – Dec 2020
 - **Campaign Tool:** Reduced latency in the tool by **22%** and **lowered man-hours from 1.5 hr to 15 min** for the marketing team to create/view promotional offers. (JAVA, Spring Boot, MySQL)
 - **Campaign Service:** Improved 2 microservices by remodeling the design and infrastructure of monolithic services into a more scalable and robust system. This **reduced the cost of resources by 33%**, enabling the system to handle more than **100k active users per day**. (JAVA, Spring Boot, MongoDB, Redis, AWS EC2, SQS, SNS, DynamoDB)
 - **Pay Later feature:** Organized and **led a team of 2-3 interns** to launch a new functionality: "Pay-Later" for the app/website that gave customers the freedom to utilize credit and pay the dues later, providing a seamless one click payment experience.
 - **Recruitment Member:** Interviewed **50+ candidates** in recruitment drives for the company.
- Ultimate Kronos Group** Noida, India
• *Software Engineer*
June 2016 - Dec 2018
 - **Store Audit:** Collaborated with **team of 10 members** to build a new module "Store Audit" built on the existing product that was intended to help retailers monitor store operations, analyze compliance trends, and provide actionable tasks to improve store operations and ensure compliance. (Java, REST, MySQL)
 - **Workforce Central:** Developed several features and provided innovative solutions to address customer requirements for the Workforce Central application that helps large corporations having **more than 500k** employees, manage workforce efficiently (JAVA, J2EE, SQL).
 - **WFC Notifications:** Upgraded the Notification module of the product by configuring it with **TLS 1.2** making the application **40% more secure** and less susceptible to attacks. (Openfire, SSL, TLS 1.2)

PROJECTS

- **Mobile Offloading (Distributed Computing):** Developed a Distributed Computing framework that demonstrates how mobile offloading can increase both the efficiency and power consumption of a process using matrix multiplication. Designed a recovery algorithm to handle failures and reached the conclusion that distributed computing is **89.62% faster and consumes 66.67% less energy** as it shares the processor load but difficult to maintain as it's implementation is complex and requires more security. (Spring '21)
- **COVID-19 Self-Monitoring (Mobile App):** Implemented a mobile application for self-monitoring COVID-19 symptoms, incorporating respiratory and heart rate measurement along with logging of user symptoms achieving a **98.5% accuracy for respiratory rate and 93.4% for heart rate** using accelerometer and camera. (Spring '21)
- **Music Recommendation System:** Implemented a recommendation system in Python that suggests songs to a user based on preferences of previous users. Aim was to identify the metrics, algorithm and dataset to be used to design the recommendation system. Technique used is Collaborative filtering using matrix factorization and the implementation was done using Numpy, pandas and Tensorflow to obtain a **Root Mean Squared Error of 0.956**, and **accuracy of 97.45%**. (Fall '21)

VOLUNTEER EXPERIENCE

- **Code Asylums** India
• *Mentor*
March 2020 - Dec 2020
 - Mentored over 100+ people from different colleges and firms in India who participated in various boot camps organized by the company Code Asylums.
 - Taught Data Structures and Algorithms and prepared curriculum for 3 levels for the DSA course.