Haramrit Singh Khurana

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EDUCATION

- **Master of Science, Computer Science | GEORGE MASON UNIVERSITY | GPA 3.76** **2019 – 2021**
  Coursework: Algorithms, Systems Programming, Object Oriented Design, Database Systems, Component-based Software Engineering
- **Bachelor of Engineering, Computer Engineering | UNIVERSITY OF MUMBAI | GPA 4.0** **2015 – 2019**
  1st Runner Up- Best Senior Thesis; 2nd Runner Up – Mumbai Hackathon (2017)

WORK EXPERIENCE

Software Engineer Intern | Nexus 8 International, Washington DC | Internship **May 2020 – Aug 2020**
- Individually developed two major web components using ASP.NET Core framework and Blazor in compliance with HIPAA
- Optimized the image upload process and decreased the upload time by 30% on average
- Developed test cases and performed unit testing of the application before release to the stakeholders
- Identified and analyzed new business and functional requirements as a part of requirement gathering sessions with customers

Backend Developer Intern | Don Bosco Institute of Technology, Mumbai | Internship **Jun 2018 – Dec 2018**
- Developed the plan and headed the team that implemented remodeling of the website Don Bosco Journal of Science and Engineering using Node.js, Express and MongoDB
- Designed and implemented a secure tag-based paper-reviewer matching algorithm to automate the review assignment process

OTHER POSITIONS

Teaching Assistant – IT207: Applied IT Programming | George Mason University, Fairfax, VA **Aug 2019 – Present**
- Designed and graded assignments and exams, held office hours, and helped students understand the core concepts of web programming in PHP

Technical Head - ACM-DBIT | Don Bosco Institute of Technology (DBIT), Mumbai, India **Jul 2017 – May 2018**
- Organized Teknack, a two-day intercollegiate online gaming festival featuring more than 10 games (Single-Player, Multi-Player & Open World). Games were played over 25000 people, a significant markup of 28 % from Teknack '17

SKILLSETS

Programming Languages: Python, Java, C, C#	**Other:** GitHub, SDLC, Docker, Kubernetes, Jenkins, Android, JUnit, Tableau, Linux, REST, Amazon Web Services
Database Systems: MySQL, MongoDB, Oracle	
Frameworks: React Native, Angular6, Django, Swing, Hibernate JPA, Bootstrap, Node.js, Spring Boot	**Areas:** Distributed Systems, Algorithms, Operating Systems, Data Mining, Machine Learning, Statistics

PROJECTS

wha2do
- A minimal design to-do list Android app built using **React Native** and **Firebase**.
- Implemented **swipe gestures** to make it easier for the user to mark task status

Play Store Link

SpaceTerra
- A single player JavaScript game that went live for ACM-DBIT's online gaming fest, Teknack 2017
- Utilized **Phaser.io** game engine, **Node.js** and **MongoDB** to host the web application on a PM2 load-balanced Nginx server
- Played by **over 12,000 players** through the festival making it the most successful game of the event

NumPy for C
- An **open-source** C library for Vectors, Arrays and Number Systems totaling **96 functions** that were 2x faster than Python equivalents
- Won 2nd Runner Up at Mumbai Hackathon (2017)

Student Survey Form
- Employed Docker and Kubernetes for containerization, **Jenkins** for **continuous integration and deployment** and GitHub for version control
- Wrote and **deployed RESTful API** for CRUD operations with **Lambda** and **DynamoDB**.

A Resource Effective Approach for Distributing Machine Learning Models over a Cluster
- An **interactive desktop application** to facilitate the **automation** of the **training process distribution** over a local network
- Maintained accuracy and achieved an overall **10% reduction** in model training time
- Technology stack: **Electron.js** and **Batch scripting** for developing the application, **TensorFlow** for devising the test models

YT Demo Link

CERTIFICATIONS

- **AWS Certified Solutions Architect – Associate (Amazon Web Services)** **Jun 2020 – Jun 2023**

PUBLICATIONS

- A Resource Effective Approach for Distributed Machine Learning over a Local Network, Khurana et al, IEEE ICAC3 (2019), Mumbai