Ashutosh Mishra

Software Development Engineer

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Education

Master of Science, Computer Science, Texas A&M University-Corpus Christi, GPA - 3.9 / 4.0 Aug 2022 - Aug 2024

Bachelor of Technology, Computer Science & Engineering, JNTU-K, GPA - 8.94 / 10 GRE(Q) - 165 / 170 Aug 2017 – Jul 2021

Technical Skills

Languages: C/C++, C#, JavaScript (Angular, React), Python (PyTorch, Tensorflow, Darts, Lightning), Java, Shell Script, Bash

Web Technologies: ASP.NET, Next.js, REST, gRPC, SOAP. **Databases** - SQL (MySQL), NoSQL (Azure CosmosDB, MongoDB, Firebase)

Developer Tools: Azure, Git, HPC, GPU/TPU, Parallelization, MPI, OpenMP, PThread, CUDA, Software Design, UML, ML/DL/Gen-AI.

Relevant Experiences

Software Developer Oct 2024 - Present

ThothIT LLC *Irving, TX (Remote)*

- Working on building microservices apps using ASP.NET, React, MySQL & Mongo. Migrating monolithic apps to microservices.
- Dockerizing microservices, introducing stateless distributed servers across many data centers, and integrating Gen-AI services.

Freelance Software Developer March 2024 - Oct 2024

Jewelry Inventory and Sales Management Software *Corpus Christi, TX*

- Developed an inventory management system for 2 jewelry stores in Corpus Christi, TX to manage around 400 customers weekly.
- Used Next.js/React, Tailwind CSS for UI, ASP.NET Core Web API for backend logic, Clerk and Identity Server for authentication.
- Brainstormed store owners, salespersons, customers and jewelry retailers to gather the software requirements specifications.

Research Assistant - Graduate October 2022 - Aug 2024

TAMUCC, Aero-Structural Optimization Lab *Corpus Christi, TX*

- Led the AI division of an NSF-funded interdisciplinary research for optimizing engineering design using ML, DL & Generative AI.
- Implemented various Gen-AI models. Designed custom data structures in C++ & Python to run parallel algorithms in HPC/GPU.
- Published papers in top-ranked journals, presented works in 6 intl. conferences & was thus offered a fully-funded PhD program.

Software Development Engineer Aug 2021 - Jun 2022

Keka HR & Payroll Technologies *Hyderabad, India (Hybrid)*

- Promoted to full-time SDE to develop cloud-based native apps using ASP.NET, Angular & Azure to serve around 1.5 million users.
- Participated in migrating to microservices which reduced infra load by 30%. Supervised 5 interns and reviewed their tasks.

Full-Stack Software Developer - Intern Feb 2021 - Jul 2021

Keka HR & Payroll Technologies *Hyderabad, India (Remote)*

- Developed new & maintained existing features for SaaS applications. Contributed to migration of Azure deployment platform.

Awards

Outstanding Islander Graduate - TAMUCC 2024

*The **best** **(exceptional)** performing student of TAMUCC College of Engineering and Computer Science*

The Trust and Safety Scholarship Scheme (**$15k** and **$10k**) 2022 & 2023

*Two scholarship awards based on idea proposition to **Cognizant Inc.** regarding a trending topic in Computer Science*

TAMUCC Scholarships (Total worth - **$9k**) 2022 - 2024

Multiple scholarship awards based on academic, research & extra-curricular involvements.

Indian Embassy Compex Scholarship (Total worth - **$30k**) 2017 – 2021

Full scholarship with stipend for 4-year undergraduate program based on exceptional results in a competitive exam.

Problem Solving **Advanced**, C programming **Advanced** 2020

*Awarded the Advanced certifications on Problem Solving and C programming by **Hackerrank***

Publications & Conference Proceedings

- Cid Montoya M, **Mishra A**, Verma S, Mures O A, Rubio-Medrano C E (2024) Aeroelastic force prediction via temporal fusion transformers. ***Computer-Aided Civil and Infrastructure Engineering [IF=8.5]***, In press. DOI: 10.1111/mice.13381
- Verma S, Cid Montoya M, **Mishra A.** (2024) Shape- and frequency-dependent self-excited forces emulation for the aero-structural design of bluff deck bridges. ***Journal of Wind Engineering and Industrial Aerodynamics [IF=4.2]***, 252, 105769. DOI: 10.1016/j.jweia.2024.105769
- 6 other international engineering conferences on the contribution of computer science/artificial intelligence in engineering.