

# Prasanna Tiwari

2312 Calender Ct, Grand Prairie, TX, 75050

☎ (567)-801-5968    ✉ pxt8726@mavs.uta.edu    🔗 LinkedIn: prasannatiwari01

## Education

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**University of Texas at Arlington**  
Bachelor of Science in Computer Science

Expected Graduation: December 2025

Relevant Coursework: Data Structures and Algorithms, Intro to Software Engineering, Computer Network Organization, Computer Programming, Operating Systems

## Technical Skills

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**Languages:** Python, C, C++, Java, SQL

**Cloud Computing:** AWS (IAM, EC2, Lambda, S3, CloudWatch)

**Software Development:** Proficient in Java, Python, HTML, CSS

**Software Tools:** Power BI, Flow, Minitab, R, SQL Server Studio, Visio, PowerPoint, Excel, MS Project, Figma

**IT Skills:** Expertise in hardware and software troubleshooting for both Windows and Mac systems, networking, database management, user support, and communication

## Certifications

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**Troubleshooting IT Remote Administration**

Issued Jan 2023

Skills: Remote Troubleshooting

**CompTIA A+ (220-1101) Cert Prep 1: The Basics**

Issued Dec 2022

Skills: Help Desk Implementation, Java

**Getting Started with Technology: Think Like an Engineer**

Issued Dec 2022

Skills: Java, Software Design

**Introduction to C++ Programming**

Issued Apr 2022

Credential ID 1227-20889321

## Projects

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**The Word Search Game — Java**

April 2024

- Collaborated in a team to design and develop a real-time, multi-user word search game using Java, CSS, and HTML.
- Designed an intuitive user interface (UI) for game creation with a user-friendly experience for word selection, scorekeeping, and game interaction.
- Developed a UML diagram to represent the software design.
- Conducted rigorous code testing to ensure the game meets user needs.
- Utilized Git for version control and maintaining clean code history.

**System Call Implementation and Process Management in xv6 Kernel — C, xv6, Git for version control**  
March 2024

- Developed custom system calls: `setColor(enum COLOR)` for setting process colors and `setTickets(int)` for adjusting process tickets, with robust validation.

- Implemented `getpinfo(struct pstat *)` to report detailed process status, including name, state, PID, color, and ticket count.
- Integrated a pseudo-random number generator for ticket-based scheduling and created a test application for CPU time slice visualization.

### **Fire Hydrant Monitoring System** — *Automated Maintenance Solution (Group Project)*

Current

- Designing and developing an automated fire hydrant monitoring system to continuously track and assess hydrant conditions, ensuring optimal readiness for emergency use.
- Implementing core monitoring features such as real-time tracking of pressure, water flow, and power consumption for proactive maintenance and issue detection.
- Integrating advanced sensor technologies to provide comprehensive depth analysis and predictive alerts for potential failures or irregularities.
- Optimizing system performance to ensure robust data communication between hydrants and the central monitoring platform, allowing for immediate response to critical alerts.
- Developing a user-friendly interface and dashboard for city maintenance teams, with a focus on real-time data visualization and alert management, streamlining hydrant maintenance processes.

## **Work Experience**

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### **Data Entry Clerk** *Janak College, Gaundakot-4, Nawalpur, Nepal*

Jan 2017 – Oct 2018

- Implemented a digital-filing solution that improved records management and customer follow-up processes.
- Reviewed work orders and accurately input data into the college database.
- Assisted with phone calls and other office duties during periods of heavy workflow.

### **Store Cashier** *Ture Burger, University of Toledo, Toledo, OH*

Sep 2021 – Dec 2021

- Provided excellent customer service, addressing inquiries, and resolving issues, enhancing the overall shopping experience.
- Successfully balanced cash registers at the start and end of each shift, ensuring financial integrity.
- Applied IT knowledge to operate and troubleshoot the store's POS system, contributing to the smooth and error-free checkout process.
- Collaborated effectively with team members to ensure a well-organized cashier area and prompt customer service delivery during busy hours.

## **Leadership & Awards**

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**Memberships:** Active member of Phi Theta Kappa and The National Society of Collegiate Scholars (NSCS).

**Awards:** Recognized for leadership and academic excellence in various initiatives, emphasizing both technical and collaborative skills.

## Core Competencies

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- Strong Presentation and Planning skills.
- Proficient in Creative Problem-Solving and Teamwork.
- Effective Active Listening and Adaptability.
- Skilled in Analytical Thinking and Quick Learning.