

## Summary

+1 (925) 819-4160 ✉ [tushink04@gmail.com](mailto:tushink04@gmail.com) 🌐 [dextron04.in](https://dextron04.in)

Software Development Engineer specializing in operating systems, compilers, and system-level software development. Extensive experience with Python, Bash scripting, machine learning frameworks including TensorFlow, and software debugging across macOS, Linux, and Unix environments. Proven track record developing enterprise-grade systems, optimizing performance by 40%+, and implementing robust software architectures using object-oriented design principles.

## Experience

### SellWiz

June 2025 – Present

Software Engineer Intern

New York, NY

- Engineered Docker-based microservices infrastructure for enterprise CRM, implementing containerization patterns that reduced deployment time by 40% and improved scalability using Linux containers and Bash automation scripts.
- Designed and developed complex AI workflow system using Temporal and n8n, improving workflow optimization by 60% through machine learning algorithms and automated process orchestration.
- Implemented test-driven development practices in agile cycles, achieving 98% code coverage using Python testing frameworks and reducing production defects by 70% through comprehensive software debugging methodologies.

### Site Service Software

Aug 2024 – Apr 2025

Software Engineer Intern (Full Stack)

San Francisco, USA

- Spearheaded full-stack migration from legacy systems to React/Spring Boot/PostgreSQL stack, achieving 100% modernization and 40% performance improvement through system-level optimization and object-oriented design principles.
- Developed 20+ RESTful APIs with comprehensive validation using Python and JavaScript, optimizing database queries and reducing response times by 30% through advanced debugging techniques on Linux environments.
- Implemented OAuth 2.0 authentication, JWT management, and OWASP-compliant security protocols, reducing vulnerabilities by 85% using secure coding practices and systematic software testing.

### MeetX

Feb 2025 – Apr 2025

AI/ML Engineer

Bengaluru, India

- Architected production-ready hybrid recommendation system using TensorFlow and PyTorch, achieving 95% accuracy in user preference prediction for 50K+ concurrent users through advanced machine learning algorithms.
- Implemented deep learning-based cold-start algorithms using Python and TensorFlow, increasing new user engagement by 40% and session duration by 25% through sophisticated ML model optimization.
- Optimized ML model performance using XGBoost and Scikit-learn, achieving 60% faster inference times through system-level performance tuning and efficient algorithm implementation on Unix-based systems.

### Glitter Fund

Jan 2023 – Dec 2023

Lead Software Developer Intern

San Francisco, USA

- Led team of 3 engineers building Django-based real-time stock screening platform using Python, integrating Tradier API and optimizing latency by 30% through advanced system-level programming and debugging.
- Engineered custom stock filtering algorithms for portfolios under \$1000, deployed on AWS EC2 with CI/CD pipelines using Bash scripts, maintaining 99.9% uptime through robust software architecture.
- Implemented Redis caching and database optimization strategies using object-oriented design patterns, improving platform response times by 45% under high user load through systematic performance debugging.

## Projects

### Custom Linux File System Implementation (C, Make, GCC, Docker)

- Engineered complete file system in C with Unix-like shell interface supporting create, read, write, and delete operations using FAT-based free space management and Volume Control Block (VCB) implementation.
- Implemented robust directory hierarchy management with full path resolution and cross-system file transfer capabilities between custom FS and Linux, demonstrating deep understanding of operating systems concepts.
- Developed interactive shell interface with command history using libreadline and pthread libraries, showcasing system-level programming expertise and software debugging proficiency on Unix environments.

### AI-Powered Content Generation System (Python, Flask, TensorFlow)

- Built automated blog content generation system using Python and Flask, leveraging OpenAI's GPT models and machine learning algorithms to produce SEO-optimized content with automated scheduling capabilities.
- Implemented responsive web interface with markdown-to-HTML conversion and persistent storage system, demonstrating full-stack development skills and object-oriented design principles.
- Integrated advanced AI workflows using TensorFlow and automated content management, reducing content creation time by 80% through intelligent algorithm optimization and systematic debugging practices.

### Real-Time Chat Application (Next.js, Socket.IO, PostgreSQL)

- Developed sophisticated real-time messaging platform using JavaScript, Next.js, and Socket.IO with JWT-based authentication and secure user management implementing object-oriented design patterns.
- Architected digital library system with organized image management using PostgreSQL and Prisma ORM, featuring drag-and-drop functionality and status tracking through advanced debugging techniques.
- Deployed scalable application using Docker containers with responsive design optimized for desktop and mobile platforms, demonstrating proficiency in system-level deployment and cross-platform debugging.

## Education

### San Francisco State University

Fall 2025

Bachelor of Science in Computer Science — GPA: 3.95 — Phi Beta Kappa Honor Society

San Francisco, California

**Relevant Coursework:** Data Structures & Algorithms, Operating Systems, Compilers, Software Engineering, Machine Structures, Database Systems, Computer Networks, Unix Programming

## Skills

**Programming Languages:** Python, JavaScript, C, C++, Bash, Java, SQL

**Operating Systems & Tools:** Linux, Unix, macOS, Git, Docker, Make, GCC, Compilers

**Machine Learning & AI:** TensorFlow, PyTorch, Scikit-learn, Machine Learning, Deep Learning

**Web Technologies:** React, Next.js, Node.js, Flask, Django, RESTful APIs, Socket.IO

**Databases & Cloud:** PostgreSQL, MySQL, MongoDB, SQLite, AWS (EC2, S3, Lambda)

**Software Engineering:** Object-Oriented Design, Software Debugging, Test-Driven Development, Agile/Scrum