

# ABHISEK KUMAR JHA

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## EDUCATION

**University of Texas at Arlington** | Arlington, USA

BS in Computer Science and Engineering GPA: 3.86/4.0

Expected May 2025

Awards: Maverick Scholarship Award) & Dean's List (2022-2023)

Courses: NLP | AI | DSA | ML | Engineering Entrepreneurship | Linear Algebra | Cryptography | OS | Computer Networks

## EXPERIENCE

**University of Texas, Arlington** | Arlington, Texas

Research Assistant under Dr. Remi Chou

September 2023 - Present

- Engaged in a pivotal NSF-funded project, "Combating Vulnerability and Unawareness in 5G Network Security: Signaling and Full-Stack Approach," focusing on enhancing the security of 5G networks against sophisticated adversarial threats and electronic warfare scenarios.
- Developed a cutting-edge encoding and decoding algorithm to reinforce the resilience of 5G networks against quantum computing threats.
- Created a comprehensive Python simulation demonstrating the efficacy of the algorithm in real-world scenarios, ensuring data integrity and security in complex communication environments.
- Collaborated closely with a diverse team of researchers from academia and industry at ZTX to consolidate ongoing research efforts in 5G security.
- Contributed to the theoretical and experimental aspects of the project, ensuring a holistic approach to 5G security challenges.

## SKILLS

Skills	Natural Language Processing, Conversational AI, Quantum Computing
Languages	Python, C/C++, C#, Java, CMake, Matlab, Git, Bash, LaTeX, Q#
Software	Linux, Tensorflow, Pytorch, Docker, ZeroMQ
Infrastructure	Google Cloud Platform, Kubernetes, Docker, GithubCI, Jenkins
Technical Skills	Backend Development, Agile Methodologies, DevOps, Testing, MongoDB, MySQL

## PROJECTS

**Smart Pay** | Blockchain Developer

Jan 2024 - Present

- Designing a web app and smart contract framework to enable public and transparent treasury management.
- Developing trust-minimized salary agreements to facilitate real-time, secure salary distribution for any organization.
- Incorporating blockchain indexing to aggregate and display historical on-chain event data within the web app and addressing the limitations of existing DeFi protocols by enhancing feature set and tackling issues related to network fees, scalability, and smart contract security.

**Narrative-Driven 2D RPG for Mobile** | Game Developer

Sep 2023 - Dec 2023

- Led the design and development of a narrative-driven 2D RPG for mobile platforms, utilizing StarUML for game structuring, Unity for game mechanics, and ibis Paint and Luna Pic for custom graphics, which resulted in a rich and immersive gaming experience for players.
- Employed a waterfall model for structured development, meticulously directing each phase from concept to final release. This approach ensured thorough completion before proceeding to subsequent stages, significantly enhancing game quality and increasing player interaction by 30%.

**CRUD-focused API with Jenkins Integration** | Software Systems Engineer

Dec 2022 - Jan 2023

- Developed a CRUD-focused API, streamlining database operations and reducing data management time by 30% and errors by 25%.
- Integrated the API with Jenkins using GitHub webhooks, automating deployments and updates, which enhanced development efficiency by 20%.

**Portable Index-Allocated File System** | File System Developer

Feb 2023 - April 2023

- Designed and implemented a portable index-allocated file system, managing 226 bytes of drive space, and supporting files up to 220 bytes, resulting in a 15% improvement in space utilization.
- Created a suite of file management commands and an efficient system for managing free nodes and blocks, reducing file access times by 55%.

**Custom Memory Management in C** | Systems Programmer

Feb 2023 - March 2023

- Developed custom malloc and free functions in C, enhancing heap management and reducing memory overhead by 65% for user processes.
- Integrated multiple allocation strategies and benchmarked performance, achieving a 30% efficiency increase over the standard malloc.