

# Marvin Tutt

## Full-Stack Engineer

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## PROFESSIONAL SUMMARY

Full-Stack Engineer with 3+ years experience in distributed systems and enterprise applications. Experience includes backend development for federal defense contracts (NGA), building microservices architectures, and developing open-source projects. Proficient in Java, Go, and Javascript.

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## TECHNICAL SKILLS

**Languages:** C++, Python, Java, Go, JavaScript

**Backend:** Spring Boot, Quarkus, Node.js, REST APIs, Apache Pulsar, Temporal

**Frontend:** React, HTML/CSS/JS, Astro, three.js, d3.js

**Cloud & DevOps:** Docker, Kubernetes, OpenShift, CI/CD, GitHub Actions, GitLab, Cloudflare

**Databases:** PostgreSQL, MongoDB, MySQL/MariaDB, Redis

**AI/ML:** MLX, PyTorch, NLP, OCR Processing

**Security:** OAuth2, JWT, RBAC, Cryptographic Signing, Vault

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## PROFESSIONAL EXPERIENCE

### Caia Tech | Fairfax, VA

#### CEO & Principal Engineer

*March 2024 - Present*

- Developed **GitForensics.org**, a guide for using Git's properties for documentation and audit trails

- Built OCR text extraction system processing 600+ historical documents from the Martin Luther King Jr. archives
- Published datasets on Hugging Face for machine learning applications
- Maintained open-source repositories on GitHub

## **Webhead Tech | San Antonio, TX**

### **Java-Spring Developer (Defense Contract - National Geospatial-Intelligence Agency)**

*January 2023 - March 2024*

- Sole backend developer on project to modernize NGA's monolithic system into microservices
  - Implemented mission management service using Apache Pulsar for messaging and REST APIs for integration
  - Set up CI/CD pipelines with automated testing and OpenShift deployment
  - Integrated with multiple teams for logging, validation, and policy execution services
  - Designed PostgreSQL database schema and API contracts
  - Delivered bi-weekly demonstrations to client stakeholders
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## **PROJECTS**

### **[GitForensics](#)**

Created educational resource explaining how Git's version control features can be used for documentation preservation and transparency.

### **[MLK Records Archive](#)**

OCR processing system for historical document digitization. Extracted text from 600+ documents to create searchable digital archive.

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## **OPEN SOURCE CONTRIBUTIONS**

- Transformer development, features such as Varlen attention, Muonclip, RoPE
- Created educational resources and documentation for developers

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## EDUCATION & SELF-DIRECTED LEARNING

- Studied distributed systems, cryptography, and machine learning through online resources and practical implementation
- Cloudflare Administrator, Google Cloud, Azure
- Continuous learning in systems programming, algorithms, and cloud technologies
- 54 credits toward B.S. in Software Engineering (in progress); self-study in distributed systems, cryptography, and ML.
- Familiarity with M365 Purview/Vault workflows, basic NIST/CIS control language, and Excel-based workpapers.
- Professional Scrum Master certification (PSM 1)

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**Portfolio:** [marvintutt.com](https://marvintutt.com) | **GitHub:** [github.com/Caia-Tech](https://github.com/Caia-Tech) |

**Research:** [huggingface.co/CaiaTech](https://huggingface.co/CaiaTech)