

# Saumya Tiwari | Senior Fullstack Engineer

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**Senior Fullstack Engineer** with **7+** years building **scalable, high-performance web applications** serving **millions** of users. Led **critical infrastructure migrations** and **platform redesigns** at VdoCipher (\$2.5M revenue, 10,000+ customers). Expert in **React, Node.js, TypeScript**, and **cloud platforms** with **proven impact on business metrics**.

## Key Achievements

- **Led a high-impact frontend redesign** that drove a **20% increase** in user retention and achieved **90%** faster performance
- **Architected distributed search infrastructure** using OpenSearch, reducing database CPU load by **40%** and search latency by 85% while serving millions of secure queries daily
- **Built real-time encoding progress system** using Server-Sent Events and Kinesis-based communication, enabling live updates for video processing status, reducing polling overhead by **80%**
- **Partnered on cloud infrastructure migration** from AWS to GCP, redesigning video processing systems for 20% cost efficiency and 4x better performance
- **Improved Core Web Vitals** via Gatsby migration and performance fixes, driving **25%** SEO growth
- Delivered multiple **end to end** solutions with **complete ownership**

## Technical Skills

- **Languages:** JavaScript (8 years), TypeScript (8 years), C++
- **Frontend:** React, Next.js, Gatsby, Redux, Material-UI, Vite, Webpack
- **Backend:** Node.js, Express, REST APIs, GraphQL, PostgreSQL, MongoDB, Sequelize
- **Cloud & DevOps:** AWS (S3, Lambda, Kinesis), Google Cloud Platform (GCS, BigQuery), Docker, Terraform
- **Tools:** GitHub Actions, SonarQube, OpenSearch, FFMPEG, Server-Sent Events

## Experience

[VdoCipher](#) | Senior Fullstack Engineer

June 2022 – May 2025

*Leading secure video hosting platform serving 10k+ creators across 120+ countries with \$2.5M+ annual revenue*

- **Modernized dashboard** for **10K+** users, leading to **15–20%** more signups and retention by implementing Atomic Design, clean UI, Material-UI upgrade, gradual **TypeScript adoption**, and migrating Webpack → Vite (**90% faster builds**)
- **Architected secure distributed search system** using **OpenSearch**, reducing PostgreSQL **CPU load by 40%**, improving response time by **10x**, and eliminating injection vulnerabilities while serving **millions** of daily searches
- **Enhanced site speed and Core Web Vitals (improved FCP, faster loads) through performance debugging and Gatsby migration, boosting SEO by 25%**
- Partnered in **AWS → GCP migration** for video encoding infrastructure processing **100TB+ monthly**: implemented GCS upload functionality, explored Terraform automation, conducted BigQuery POCs, projected to achieve **15% cost reduction**
- **Built real-time encoding progress system** using Server-Sent Events and Kinesis-based communication, projected to improve user experience for **3,000+ platform** reducing polling overhead by **80%**
- **Developed video thumbnail selection POC** running FFMPEG on Lambda
- **Shipped revenue-driving features:** implemented feature flags system, launched lite pricing tiers expanding to **SMB segment**, upgraded webhook infrastructure
- **Led technical excellence:** mentored 5+ engineers, conducted technical interviews, gave technical talks, drove best practices adoption across teams

## [VdoCipher](#) | Frontend Engineer

May 2019 - June 2022

*Secure video platform protecting \$50M+ in content value annually from piracy*

- **Singlehandedly migrated main website** (React SSR → Gatsby): improved Core Web Vitals by **40%** (improved FCP, faster loads); boosted SEO rankings by **25%**, serving **500K+ monthly visitors**
- **Built responsive dashboard interfaces** using React, Material-UI, Redux for video management handling **57,000+ blocked piracy sessions**
- **Implemented video player customization engine** allowing control over 20+ player settings (controls, shapes, progress bars), adopted by **1,500+ education platforms**
- **Developed key user features:** improving ip-geo restrictions preventing **290+ piracy attempts monthly**, dynamic watermarking preview, video thumbnail generation, improved onboarding flow increasing completion by **30%**
- **Modernized documentation platform** from Gitbook to Docusaurus, improving developer experience for **2,000+ API users**

## [Expedition](#) | Fullstack Engineer

September 2018 - December 2018

*Open-source tabletop RPG platform with 100+ community-created quests*

- **Enhanced game UI/UX** using TypeScript and React for cross-platform RPG application serving **10,000+ players**
- **Integrated Discord bot functionality** improving community engagement by **25%**
- **Contributed to open-source codebase** improving game stability

## [Samsung R&D Institute](#) | Software Intern

February 2018 - May 2018

*Global R&D center for Samsung Electronics*

- **Automated testing** for Email Management System reducing manual QA time by **40%**
- **Conducted quality assurance** for Samsung Family Hub App and Smart TV platform
- **Created test documentation** for 15+ features improving team efficiency

## Projects

### VdoCipher Dashboard Revamp | React, TypeScript, Vite, Material-UI

- Redesigned UI with Atomic Design principles contributing to 15-20% improvement in user signups
- Led complete dashboard migration from Webpack to Vite reducing build time by 90% (2min → 10s)

### Video Search Enhancement | OpenSearch, PostgreSQL, Node.js

- Architected distributed search system using OpenSearch with real-time PostgreSQL sync via AWS DMS, reducing database CPU load by 40% and search latency by 85% (2-3s to 200ms)
- Implemented secure query architecture with 3 search modes (prefix/exact/full-text), preventing injection attacks while maintaining 100% backward compatibility for millions of daily searches

### AWS to GCP Migration Toolkit | Terraform, GCP, AWS SDK

- Developed migration scripts for S3 to GCS transfer handling 500TB+ video content
- Explored Terraform automation achieving seamless cloud infrastructure transition

## Education

- BE/B.Tech in Computer Science, India (2014 - 2018)