RAJAT KHANDURI

📞 +91 7617* **405
📍 India (CEST)
in wthrajat
✉ wth.rajat@gmail.com
○ wthrajat

EXPERIENCE

Software Engineer   *Nov 2024 – Present*
Amboss Technologies ○ *ambossTech*   *US (Remote)*

- Designed and built a centralised **OAuth 2.0** authentication system with 2FA (TOTP) as the single sign-on identity layer shared across all Amboss products
- Contributed to **Amboss Rails**, a self-custody Bitcoin yield platform on the Lightning Network; users deploy funds to their own node and earn yield without surrendering custody
- Contributed to **Amboss Magma**, the largest peer-to-peer Lightning liquidity marketplace; enables node operators to buy and sell channel liquidity using HODL invoices as trustless smart contracts
- Designed and maintained GraphQL and RESTful API design (NestJS, TypeScript) powering multiple Amboss products; integrated frontend (Next.js/React) with those APIs and contributed to end-to-end QA
- Integrated LND gRPC APIs for channel management, routing, and liquidity operations; worked with Taproot Assets Protocol (TAP) via `tapd` for a Bitcoin-native **DEX**
- Contributed to Kubernetes workload management (Deployments, Services, ConfigMaps) and Helm charts within a microservices architecture; maintained CI/CD pipelines on AWS for reliable container delivery
- Monitored services using Datadog (dashboards, APM, log pipelines, alerts); contributed to **SOC 2** compliance controls, audit logging, and access policies

Software Developer   *Nov 2023 – Oct 2024*
Bitcoin.org (CoinSwap) ○ *citadel-tech*   *US (Remote)*

- Maintained **CoinSwap**, a privacy-focused atomic swap protocol for Bitcoin; contributed as one of the core library maintainers
- Achieved **28.8%** storage efficiency by transitioning wallet data to binary CBOR encoding
- Reduced latency by **21.7%** in integration tests by optimizing encoding/decoding of protocol messages
- Owned the Rust API documentation; led the `App Cleanup` milestone — removed legacy code, modularized architecture, and overhauled the wallet configuration system

Software Developer, Summer of Bitcoin   *May 2024 – Sep 2024*
CoinSwap ○ *citadel-tech/coinswap*   *US (Remote)*

- Replaced the CoinSwap wallet with a new implementation built on BDK, constructing wallet infrastructure from scratch using BDK's chain interfaces and data structures
- Reimplemented core components (`WalletStore`, `Wallet`) and their APIs; modularized the codebase for maintainability and scalability
- Introduced `Fidelity` and `SwapCoin` variants to the `KeychainKind` enum for improved key management
- Redesigned wallet configuration — migrated sensitive path fields, improved secure data handling, and integrated RPC synchronization support

Software Developer, Google Summer of Code   *May 2023 – Sep 2023*
XWiki ○ *xwiki-contrib/application-interactive-link-visualizer*   *France (Remote)*

- Built an interactive link visualizer for XWiki — a graph of interconnected wiki pages with a customizable panel for localized display around the current document
- Added features including node search, Solr Search Facets, query filters, zoom controls, iteration adjustments, result filters, and theme compatibility
- Integrated XWiki APIs to extract detailed page data (backlinks, titles, URLs, doc references) dynamically
- Made **165+** commits, resolved **30** Jira issues, and contributed to the core XWiki platform beyond the primary project
- Documented the tool on the XWiki Extensions page, published a blog post, and created a YouTube demo

TECH SKILLS

Languages	Rust, JavaScript, TypeScript, Python, C/C++, Solidity, Shell Scripting
Backend	Node.js, NestJS, gRPC, REST, GraphQL, Apollo Studio, PostgreSQL, Redis, OAuth 2.0, JWT
Frontend	Next.js, React, D3.js, Graphology, SigmaJS
Bitcoin & Lightning	Lightning Network, Bitcoin Protocol, LND, Lightning Terminal (LITD), Taproot Assets Protocol (TAP), Polar, Voltage, Ordinals, Runes, BDK
DevOps & Cloud	AWS, Kubernetes, Docker, CI/CD, Datadog, GitHub Actions, Linear
Tools	Git, NPM, Jira, Apache Solr, Apache Maven, Selenium

ACHIEVEMENTS

SoB'24	Selected in Summer of Bitcoin out of 5000+ applicants from 50+ countries	'24
LFX'24	Selected in Linux Foundation Mentorship out of 10,000+ applicants from 63+ countries	'24
GSoC'23	Selected in top 2% of 43,765 applicants; delivered 350-hr project with all features in 1.5 months	'23
MLH'23	Selected in Major League Hacking Fall'23 under Software Engineering track	'23
CodeChef	(Data Structures & Algorithms) May'22 Long Challenge II & I, secured Global Rank 1 & 143 respectively	'22
Hacktoberfest	Completed twice with 50+ pull requests merged	'22, '23
Contributions	**1024+** total pull requests merged (open-source & private) including Thunderhub, Bancolibre, Rust Bitcoin, BDK, Sigma.js & more; freelanced on GreatWall	'20–present

PROJECTS

Seamcarving
wthrajat/seamcarving

→ *Content-aware image resizing algorithm implemented in C++*
C++, OpenCV, CMake, Glew

- Resize images while preserving important features and content, demos and examples given
- Utilizes dynamic programming for efficient seam identification and removal

Lightning Capacity Chart
wthrajat/lightning-capacity-chart

→ *Visualizes Lightning Network node capacity over time using Amboss API*
TypeScript, Node.js, Amboss API, HTML

- Fetches Lightning Network node capacity metrics from the Amboss API and generates an interactive HTML chart
- Supports multi-node comparison with configurable public keys, node names, and custom date ranges via `.env`
- Outputs a self-contained `capacity-chart.html` and auto-opens it in the browser on `pnpm run dev`

NPM Support in WebJars
wthrajat/npm-in-webjar

→ *Enables to use NPM packages & TS through WebJars*
NPM, TypeScript, Apache Maven, Java

- WebJars don't inherently support NPM packages & TypeScript out of the box; not anymore!
- Using this, one can use NPM packages & TypeScript's features into web applications through WebJars

Windows Junk Cleaner
wthrajat/windows-junk-cleaner

→ *Cleans junk from root drive in windows operating system*
Python, OS, Tkinter

- Rapidly scans C:\ drive to eliminate various junk files like temporary, cache, obsolete files
- Real-time progress tracking for junk scanning and deleting junk & GitHub actions for python workflow

EDUCATION

Bachelor of Engineering, Panjab University	*Year: 2025, Grade: 7.25/10*
High School, CBSE	*Year: 2020, Grade: 9.56/10*