Shadman Rakib

shadmanrakib.com | srakibnyc1@gmail.com | linkedin.com/in/shadman-rakib | github.com/shadmanrakib

EDUCATION

City University of New York, Hunter College   New York, NY
Bachelor of Arts in Computer Science – GPA: 3.93/4.0   *May 2025*
- Courses: Research in AI & ML, Data Structures & Algorithms, Object Oriented Programming, Big Data Technologies, Database Management, Web Development, Computing Theory, Computer Architecture, Operating Systems, Discrete Mathematics, Proofs-based Linear Algebra, Multivariate Calculus

EXPERIENCE

Persona (now Mass Finance Inc)   New York, NY
Software Engineering Intern   *Jan 2023 – Sept 2023*
- Integrated financial treasuries into React frontend, allowing 5+ communities to easily manage funds exceeding $100,000.
- Architected a TypeScript routing API using generics & type inference, streamlining route-based state management for complex UI elements like sidebars, eliminating 450+ lines of code, 5+ routing bugs, and development complexity.
- Built a gesture-enabled React Native bottom sheet used in 90+ components, enhancing user experience & development.

Headstarter   New York, NY
Software Engineering Intern   *Sept 2022 – Mar 2023*
- Developed an AWS backend microservice for push notifications and integrated it with a Next.js frontend, driving a 36% increase in user engagement and achieving 99.99% uptime.
- Designed & implemented an intuitive lesson UI, eliminating reports of confusion & driving an $80K increase in revenue.
- Optimized performance with tree-shakeable imports, reducing bundle size by 50% & cutting page load times by 38%.

Provecho   Remote
Founding Software Engineer   *Jul 2021 – Jul 2022*
- Built Provecho from a $0 to $10 million venture, starting as an intern, but was soon promoted to lead founding engineer.
- Engineered Provecho's modern recipe platform & creator dashboard, serving 200K+ monthly users with 99.99% uptime.
- Engineered an automated image processing pipeline that converted and resized images to WebP format, reducing CDN transfer costs by 50% and significantly improving page load times & P99 latency metric times by 62%.
- Interviewed food influencers (700K–2M followers) to gather insights and refine products based on customer needs.
- Translated business requirements and feedback from investors, including LinkedIn's former CEO Jeff Weiner and Brian Rumao, into technical specifications, aligning product strategy with scalable engineering solutions.

PROJECTS

Patzer Gambit - Chess AI (2000+ elo) | *Rust, Lichess Bot API, Linux, Digital Ocean*   Blog Post | GitHub
- Engineered a very strong chess AI using bitboard representations, reducing memory usage & increasing cache hits.
- Tested correctness & performance through mate & puzzle unit tests, PERFT integration tests, and engine duels.
- Implemented the UCI engine protocol and deployed the AI on Digital Ocean to interface with the Lichess Bot API.

Raycaster (2D to 3D graphics) | *Golang*   Blog Post | GitHub
- Synthesized a 3D world from a 2D top down map view in Golang using raycasting and extensive trigonometry.

Nasty Fun Automatas - Regex Library | *Rust*   Blog Post | GitHub
- Implemented a regex library with unit tests based on Non-deterministic Finite Automatas & Thompson's construction.

Khaiso Recipe App | *TypeScript, React Native, AWS, CDK, SvelteKit*   Blog Post
- Architected a scalable, infrastructure-as-code backend using AWS Lambda, API Gateway, DynamoDB, SES, and Google Identity Platform with sub-100ms response times and 99.99% availability to power React Native and Sveltekit apps.
- Implemented a search engine that uses keywords & vector embeddings from machine learning models for better discovery.
- Created a recipe scraper surpassing Samsung Food in extracting unstructured data from sites lacking metadata.

TECHNICAL SKILLS & INTERESTS

Languages: TypeScript, JavaScript, Python, C++, Rust, Golang, Java, SQL, CSS, HTML
Frameworks & Libraries: React, React Native, Next.js, Svelte, SvelteKit, Node.js, Express.js, Flask, Redux
Other Technologies: Git, Docker, Amazon Web Services (AWS), Google Could Platform (GCP), Firebase, Supabase, PostgreSQL, MongoDB, Databases, Puppeteer, SASS, RESTful APIs, Elasticsearch, Github Actions (CI/CD)
Concepts: Agile Methodologies, Frontend, Backend, Full Stack, REST API, Microservices, Serverless, Unit Testing, CI/CD
Interests: Sitcoms, Ping Pong, Space Exploration, One Piece, Vinland Saga, Entrepreneurship, Logo Design, UI/UX Design