Kenny Hui

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Education

Stony Brook University — Stony Brook, NY
Bachelor of Science in Computer Science — *Aug 2024 – May 2028*
Relevant Coursework: Analysis of Algorithms, Data Structures, Systems, Principles of Programming Languages
Awards: Code-A-Site 2025 First Place

Experience

Amazon Web Services — Sep 2026 – Present
Software Development Engineer Intern — *Seattle, WA*

- Built a Java service automating Elastic Load Balancing (ELB) instance-type configuration rollouts with AWS Step Functions, updating one Availability Zone at a time and targeting approximately 90% less operator time
- Implemented SHA-256-validated S3 writes and automatic reverse-order rollback with conditional writes to preserve concurrent changes; verified full restoration through staging fault injection across every rollback path
- Built an hourly reconciler comparing EC2 offerings, configuration checksums, and mappings to classify six drift states per instance type across Availability Zones and regions, replacing manual audits with one API query
- Built an in-memory AWS Step Functions test harness that runs real rollout code in milliseconds, models retries and error routing, and replays every step to verify idempotency

Stony Brook University — Jan 2026 – May 2026
Teaching Assistant — *Stony Brook, NY*

- Led twice-weekly Java labs for 120+ students in Introduction to Object-Oriented Programming (OOP) and helped debug assignments on recursion, multidimensional arrays, and file input/output (I/O)
- Wrote Java lab materials, graded programming assignments, and taught object-oriented programming principles, including inheritance, polymorphism, and abstraction, during office hours

Web Development Club — Aug 2025 – Present
Treasurer, formerly Webmaster — *Stony Brook, NY*

- Built the club website with SvelteKit and Sanity CMS for event listings, photo galleries, and board profiles, integrating content management with reusable Windows 98-inspired UI components and custom artwork
- Managed the club's line budget and purchasing for events, workshops, and club activities through student government forms and invoice requests

Projects

Freetime | *TypeScript, SvelteKit, PocketBase, Tailwind CSS, OCI*

- Built a full-stack SvelteKit scheduling app used by 30+ students to share class schedules and compare availability
- Automated schedule imports from copied PeopleSoft text with a TypeScript parser that normalizes cross-browser formatting and extracts class times, meeting days, and locations using regular expressions
- Implemented Google OAuth 2.0 authentication and real-time data synchronization for schedules, friends, and tasks using PocketBase collection subscriptions and reactive Svelte stores

Flaggle | *TypeScript, SvelteKit, Tailwind CSS, Node.js*

- Built a SvelteKit flag guessing game using the HTML Canvas API for pixel-by-pixel image comparison to reveal matching regions, with Fuse.js fuzzy country search and keyboard shortcuts
- Moved flag rasterization and resizing out of gameplay with a Node.js/TypeScript pipeline using Sharp to convert downloaded SVGs to uniform 360 × 240 PNGs during npm postinstall
- Implemented IndexedDB precaching of 254 flag assets to avoid repeat downloads across sessions

Bunny Simulator - Code-A-Site | *TypeScript, SvelteKit, Tailwind CSS*

- Won first place as a solo developer at Code-A-Site 2025, a four-hour competition with 40+ participants
- Built a SvelteKit idle game with reactive state management for upgrade pricing, localStorage persistence, seeded procedural scenery, and frame-independent animation using requestAnimationFrame

Technical Skills

Languages: TypeScript, JavaScript, Java, Python, C, HTML, CSS, SQL, C#, VB.NET, R, MATLAB
Frameworks & Libraries: SvelteKit, Svelte, Node.js, Express.js, Tailwind CSS, React, Astro, Electron, Socket.IO
Tools: Git, Docker, Cloudflare, Amazon Web Services (AWS), AWS CDK, AWS Step Functions, DynamoDB, IndexedDB, Oracle Cloud (OCI), Vercel, Supabase, PocketBase, Claude Code, OpenAI Codex