Nikhil Dronamraju
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Full-stack Ruby on Rails/React developer with 2+ years of experience in a rapidly growing startup environment.

SKILLS:

Languages: Ruby, JavaScript (TypeScript), SQL, Python
Frameworks/Libraries: Ruby on Rails, Next.js, jQuery, Turbo, Stimulus.js, Sidekiq
Databases/Data Stores: PostgreSQL, Redis
Cloud/DevOps: AWS (EC2, ECS, Lambda, RDS, S3, CloudFormation, CloudFront), Docker, Jenkins
Testing: RSpec, Playwright, Jest
Other: Node.js, RabbitMQ, GraphQL, Stripe, Hotwire, Git

WORK EXPERIENCE:

Software Engineer | Boddle Learning | Tulsa, OK | Jan 2023 – Feb 2025
Boddle Learning is an EdTech company providing a cross-platform video game in which students answer US-state approved math/English questions while engaging in multiplayer gameplay. In addition to the game, the platform gives educators tools like personalized learning plans for each student, detailed reports on student performance, and adaptive recommendations to help identify and address each student's learning gaps.

- **Supported 15x user growth (1M+ to 15M+) by developing and maintaining systems across Boddle's full platform**: Concurrently worked on three applications including their core educator platform, an internal CRM to manage educational content and users, and their 3D educational game itself. Also developed numerous background jobs to provide marketing and finance teams with user metrics. *(Ruby on Rails, Next.js, PostgreSQL)*
- **Led end-to-end development of a system that converted classroom materials to video gaming sessions**: Architected an event-driven system in which teachers created/uploaded their own questions (either via AI, files, or an in-house application) and have students answer them in a gaming session. System scaled to 150K+ questions daily, supported text, images, videos, and text-to-speech synthesis, and implemented an AI filter to prevent inappropriate material on an educational platform. *(OpenAI API, RabbitMQ, Redis, Dragula, Webpack, CKEditor, Google TTS API)*
- **Optimized system performance by 96%:** Monitored/identified several performance issues in Boddle's data reporting services and improved them by combining front-end pagination, batch querying, and bypassing ActiveRecord with raw SQL. Lowered the database query count from 128K+ to ~800, and page loading time decreased from 2+ minutes to ~5 seconds. *(amCharts, will_paginate, SQL, ActiveRecord, Bullet)*
- **Re-architected the company's payment integration**: Designed and implemented a new payment integration strategy across the educator portal and web versions of the game due to changes in US tax laws requiring new data be collected. Created a custom UI using Stripe's Elements API, integrated it with a Unity codebase, and mounted a separate API within the educator platform to securely process transactions. *(Stripe, Grape)*
- **Developed a webcam-based authentication system to improve user retention:** Created a QR code-based authentication system so that the game's younger users (K-2 students) could access the platform without needing to remember their password. Created an in-house API that encrypted user authentication data, stored this information in SVGs, and then converted HTML files containing these SVG images to PDF files. Also implemented an integration with computer webcam systems so users could hold these printed PDF files to their webcam in order to log in. *(RQRCode, WickedPDF, Base64, Instascan)*
- **Designed internal tooling that generated game configuration from Excel files:** Designed a file processing system that allowed the company's game design team to upload Excel files (containing data on Boddle's game configuration) and converted them into live gaming configuration so that the team could test and improve level design easier. *(Roo, Redis)*
- **Best practices/codebase improvements:** Integrated the platform with an automated documentation generator to create the company's first API documentation. Also worked with DevOps to resolve gem issues in Alpine Linux containers, and successfully containerize environments for CI/CD-based deployments to testing/production. Additionally, introduced the company's first unit/E2E testing-suites alongside QA and another engineer. *(RDoc, RSpec, Playwright, Jenkins, Docker, AWS ECS)*

Junior Developer | Texas A&M High Performance Research Computing (HPRC) | College Station, TX | Feb 2022 – Dec 2022
A Texas A&M University research department, focused on providing supercomputing resources, education, and support for other research departments.

- **Created an AWS-style dashboard to monitor hardware utilization on a user-by-user basis**: Developed a dashboard that collected and displayed researchers' supercomputing usage (CPU, memory, disk space, nodes used, etc.) and billed them monthly based on their usage. (*Python2, SSL, jQuery, Ruby, Sinatra, SLURM)*
- **Published university research on supercomputing infrastructure:** Collaborated with university professors to publish research regarding modern day GPUs and integrating them with supercomputing environments. Also collaborated with department system administration to create some low-level infrastructure around connecting computing nodes.
- **Taught courses:** Tutored multiple professors on how to use A&M's SSL-backed supercomputing environments, introducing them to connecting to the environments via the shell, monitoring their usage, and utilizing different resources for their researching needs.

EDUCATION:

B.S. Industrial Engineering | Texas A&M University | College Station, TX | Aug 2018 – Dec 2022
National Merit Scholar, President's Endowed Scholar
Publications: Cybersecurity and Data Science Curriculum for Secondary Student Computing Programs (presented at SC '22 annual research conference)