John Alvin Ambalong

Software Engineer

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Summary

Software engineer building production Rails applications with Hotwire, PostgreSQL, and Docker.
Creator of Pangu Terminal, a resource optimization platform deployed to DigitalOcean with Kamal.

Skills

Languages: Ruby, JavaScript (ES6+), SQL (PostgreSQL), HTML5, CSS3
Frameworks: Ruby on Rails, Hotwire (Turbo/Stimulus), React
DevOps: Docker, Kamal, DigitalOcean, Linux/Windows Administration, CI/CD (GitHub Actions), Git/GitHub
Technologies: RESTful APIs, Testing (RSpec), Object-Oriented Design, JSONB

Projects

Pangu Terminal | Rails 8, Hotwire, PostgreSQL, Docker, Kamal 2

Resource optimization platform calculating material farming requirements from player inventory data

- Designed polymorphic data model with JSONB-cached aggregations avoiding recomputation on page loads
- Built cost calculation engine aggregating requirements across 10+ static cost tables and dynamic mapping tables
- Detects surplus materials eligible for 3-to-1 conversion to higher tiers, reducing total farming requirements
- Implemented cookie-based guest sessions with automatic plan migration on signup
- Containerized with Docker and deployed to DigitalOcean using Kamal 2

Ruby Chess Engine | Ruby, RSpec, Git

- Implemented collision detection and legal move validation for all piece types including checkmate
- Applied Single Responsibility Principle across Board, Piece, and Player classes for modular, testable code

Pebble List | React, JavaScript, Vite

- Built component-based architecture with React hooks managing state and data flow
- Implemented full CRUD functionality with immutable state patterns and local storage persistence

Experience

Information Technology Intern, Walla Walla Community College — Jan 2025 – Present

- Execute OS imaging and hardware assembly for 50+ workstations ensuring standardized environments
- Enforce data privacy protocols by securely wiping SSDs from decommissioned hardware
- Transform raw lab-usage data into executive summary reports for departmental decision-making
- Perform A/V equipment inventory audits and support server room hardware configuration

Education

Associate of Applied Science in Software Design | Walla Walla Community College — Expected June 2026
Relevant coursework: DevOps & Infrastructure, Unix/Linux Systems, Database Design, Dynamic Web Design

Undergraduate Studies (Computer Science and Mathematics) | Washington State University — 2018 – 2019