

Nehemiah Newell

Cupertino, CA | Pittsburgh, PA | nehemiah.newell@gmail.com | 503-803-7379
GitHub: <https://thedragonbeyond.github.io/RefChecker/>
LinkedIn: [linkedin.com/in/nehemiah-newell-b63ab3b7](https://www.linkedin.com/in/nehemiah-newell-b63ab3b7)

Education

Arizona State University | B.S., Computer Science / Software Engineering (2025)

Experience Summary

Recent Computer Science grad w full-stack and systems software skills using Python, C++, Ruby, Swift and REST APIs. Projects include an AI-assisted reference validation tool, a File Manager with embedded AI and an iOS music delivery platform. Strong foundation in modular design and test-driven development, GenAI, and agile methods.

Core Skills

- Languages: Python, C++, Java, Ruby, Swift 15, PHP, SQL, Javascript,
- Frameworks/Web: React, Angular, Django, Rails, MVC Patterns, REST APIs
- GenAI Engineering: Tool orchestration, multi-turn planning, structured prompting
- Tools & Infrastructure: Pycharm, Claude Code/CoWork, Gemini, OpenAI

Technical Projects

TwinsMusic: iOS Delivery Platform (Senior Capstone): Collaborated in a distributed three-person team using Agile standups to deliver iOS client functionality for an e-commerce music catalog:

- Designed and delivered a backend-driven UI in Swift 15, allowing dynamic control of navigation and page availability without requiring app store updates.
- Lead development of authentication flows, user account state handling, and integration with Apple StoreKit.

SQL & Web Architectures: Built a multi-user SQL dB (SQL Server) survey and testing system with C# front-end. Ran comparison tests/surveys. Allowed editing those tests. All test/user information stored on SQL server. Accessed remotely. Designed update paths that let surveys grow or change without losing information or context. Developed full-stack applications including a Ruby on Rails forum with admin/user permission logic, a Django hashtag analytics tool for conversation tracking, and a PHP e-commerce storefront.

RefChecker: AI-Assisted Reference Validation System: Hallucinated references are the bane of academic paper reviews. RefChecker automates reference validation using Gemini/GROBID-docker extraction and programmatic verification using authoritative sources (CrossRef, PubMed, etc). Engineered a modular, plugin architecture with a Tkinter GUI to support individual and batch processing of papers. Coded using Opus 4.6, Claude Code. Integrated with personal git system for code and context management, embeds Gemini for extraction/validation. Git listed above.

Writer's Assistant: LightRAG-Powered Knowledge Base & Wiki Writer's Assistant: This app is a RAG system paired with a Karpathy-inspired wiki structure. It ingests complex documents and automatically generates interconnected wiki pages without losing context. It is designed to track relationships between entities while maintaining an unaltered record.

- Implemented a LightRAG backend to extract and utilize graph-based relationships, automatically discovering and mapping complex connections across the wiki.
- Deployed AI agents to filter raw document ingestion, determining the initial, limited selection and structure for the starting wiki.
- Built a chatbot that uses the wiki for its knowledge base.