

Nathan Henderson

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EDUCATION

University of Wollongong

Bachelor of Computer Science, Major in Cyber Security

Wollongong, NSW

June 2019 – July 2024

TAFE NSW

Diploma of Software Development

Petersham, NSW

Feb. 2018 – Nov 2018

EXPERIENCE

Analyst Programmer

University of Wollongong

June 2022 – Present

Wollongong, NSW

- Led development of internal Confluence Cloud plugin on the MERN stack, including a fully-featured REST API with Microservices that communicates between MongoDB and the React client.
- Reverse-engineered legacy ASP.NET/VB.NET apps to implement a major new health dataset that required new complex database views to facilitate intricate data validation through our MSSQL Server via jQuery calls.
- Decompiled an internal library that managed user privileges we had lost the source code prior to re-implementing it for expansion and greater granularity.
- Created a new management system for our bitwise based user privilege system that was previously hard-coded and limited in scope.
- Upgraded security on our WinForms desktop apps to use hashing, salting, generative encryption keys and DPAPI as well as implementing a comprehensive CSP on our ASP.NET sites.
- Designed a chunked uploading system to facilitate large video file uploads alongside a customized video.js player to meet stakeholder requirements.
- Integrated Email support to facilitate password resets and reminder notifications via the SMTP2GO API alongside a flexible email template system.
- Worked with key stakeholders to create detailed technical requirements for our upcoming move to a Cloud-Based system, as well as helping identify key improvement areas.
- Created optimized event-driven workflows through Azure DevOps Pipelines for some of our test environments.
- Use Jira to facilitate our Agile development cycle, with fortnightly sprints and daily standups.

PROJECTS

MVNFOManager | C#, Entity Framework, SQLite, Widevine, Avalonia

Jan 2024 – Present

- Manage library of Music Videos through generated NFO Metadata, grouped by Artists and Albums
- Built-in search and downloading for YouTube Music and Apple Music
- Implements Authentication and WideVine decryption for Apple Music content
- Uses a SQLite database with a third-party front-end library alongside custom made components

YTMusicNet | C#, Python

May 2025 – Aug 2025

- .NET port of a Python library for YouTube Music
- Unofficial API that parses through complex Server-Side Rendering
- Implements account authentication for authenticated requests
- Moved from untyped JSON response data to clearly defined models/objects
- Uses xUnit for Unit Testing

TECHNICAL SKILLS

Languages: C#, Python, Golang, SQL (SQL Server), JavaScript, HTML/CSS, VB.NET

Frameworks: .NET, NET Core, EF, React, Node.js, xUnit

Developer Tools: Visual Studio, VS Code, Rider, Git, Postman, HTTP Toolkit, Azure DevOps, Docker

Libraries: Express, Mongoose, log4net, Newtonsoft.Json, FFMpeg, HTTPClient, Avalonia, jQuery