WCU

FEEDSYNC CLOUD RSS READER
PROJECT DELIVERABLE 1

Spring 2025 CSC468-01: Introduction to Cloud Computing

Team Name: CloudVision

Team Members:

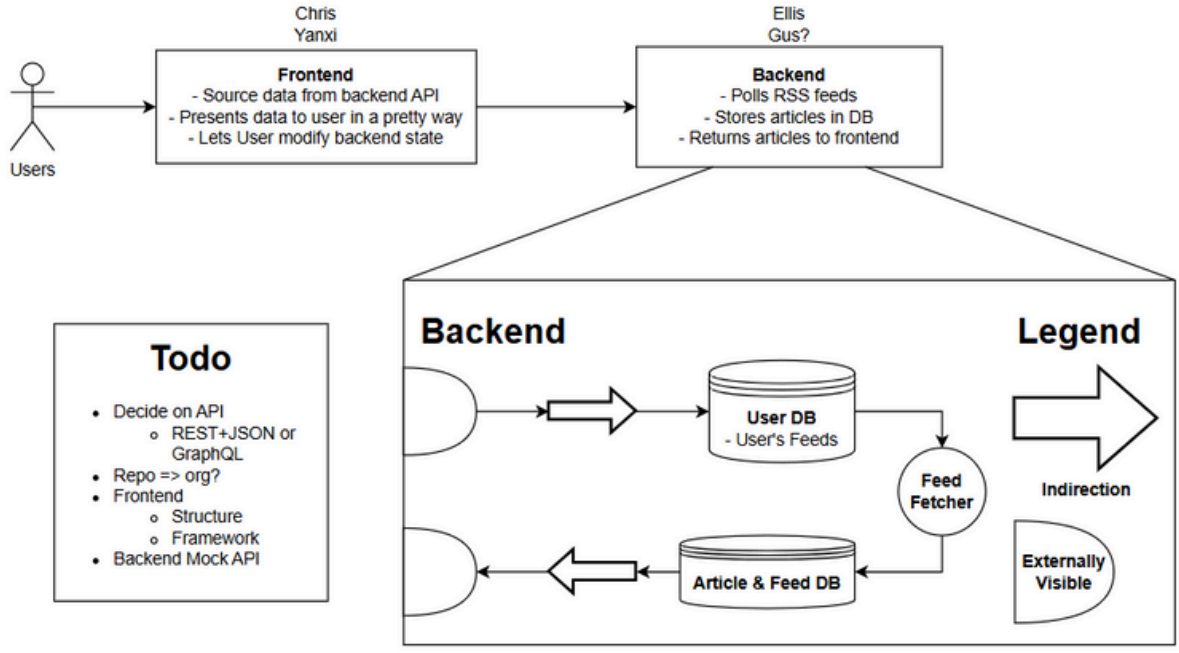
- Ellis Weaver-Kreider
- Yanxi Wei
- Gustave Johannesen
- Chris Ross

Date: February 10, 2025

Table of contents

Chapter 1: Project Vision

The goal of this project is to develop an RSS Reader that allows users to subscribe to RSS feeds, retrieve articles, and display them in a user-friendly format. The system consists of a frontend interface for users to interact with and a backend service that manages data retrieval, storage, and processing.



1.1 Introduction

In today's fast paced world, information is constantly flowing from numerous sources, making it difficult for users to stay informed without feeling overwhelmed. Our team envisions FeedSync, a cloud-native RSS reader designed to simplify content consumption. By leveraging cloud computing, our goal is to create a system that not only aggregates content but delivers it seamlessly, whether accessed from a desktop at work or a mobile device on the go.

While RSS feeds are efficient for machines, they aren't user-friendly for humans. FeedSync bridges this gap by providing an intuitive, easy-to-use interface that makes reading aggregated content simple and enjoyable, all while being backed by a scalable cloud infrastructure.

- Many sites publish event feeds with RSS & Atom feeds
- These feeds are machine-readable, not human-readable
- A feed reader presents these feeds in a digestible way to humans.
- An aggregator takes multiple feeds and combines them, such as the Linux Kernel Planet

1.2 High-Level Overview

Our system architecture is structured into two main components: the frontend and the backend. Each component has distinct responsibilities that work together to provide a seamless RSS reading experience for users.

The frontend, developed by Chris and Yanxi, serves as the user interface, enabling users to interact with the RSS reader efficiently. It is responsible for:

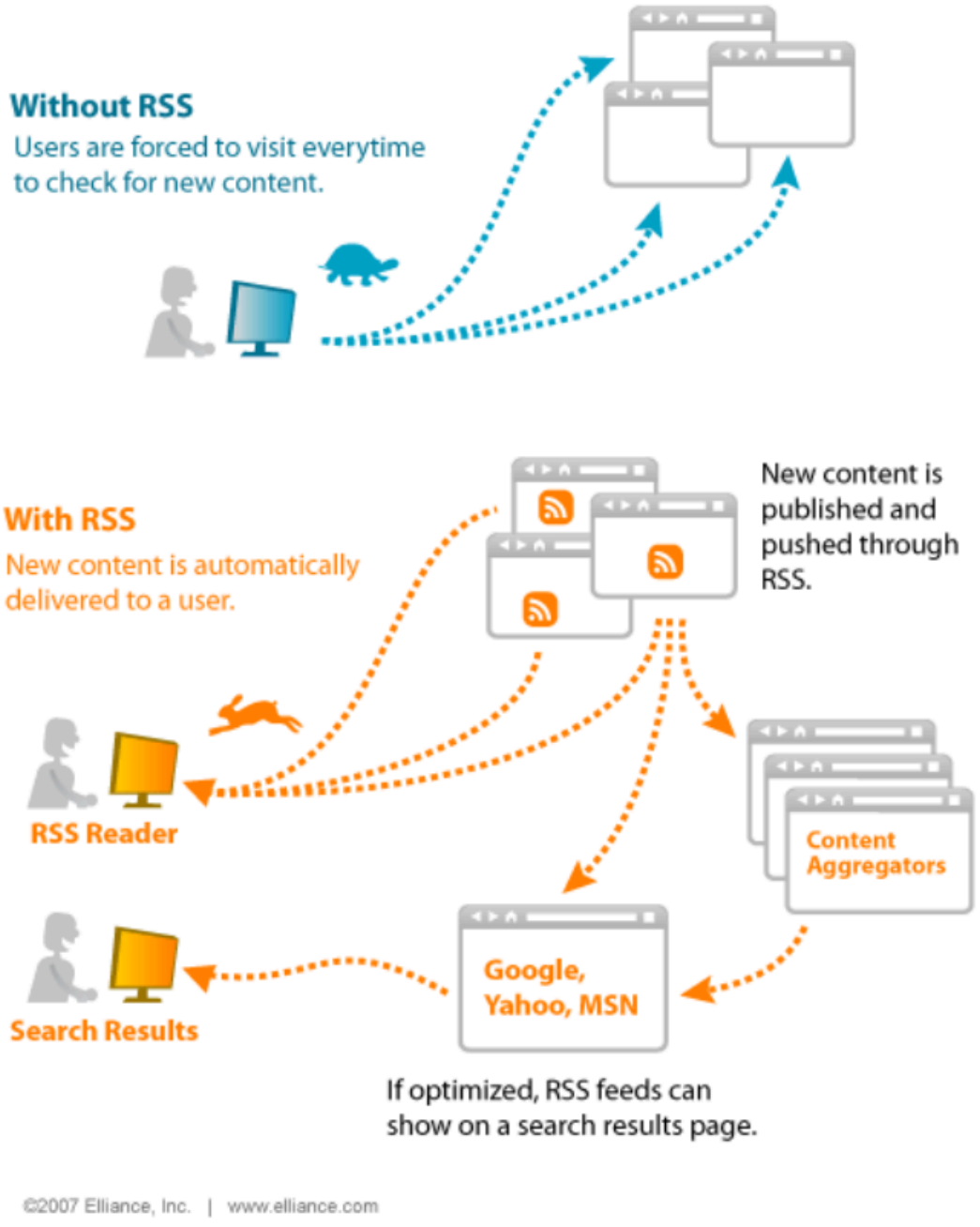
- Fetching data from the backend API to retrieve RSS feed updates.
- Displaying articles in a structured and user-friendly format.
- Allowing users to subscribe to, modify, or remove RSS feeds according to their preferences.

The backend, developed by Ellis and Gus, is responsible for data processing and management. This component handles:

- Polling RSS feeds from various sources at regular intervals.
- Storing fetched articles and feed data in a structured database.
- Providing a REST API that facilitates communication between the frontend and backend, ensuring efficient data retrieval and synchronization.

1.3 Key Features

- Allow users to register a list of RSS & Atom feeds
- Periodically fetch new articles/entries
- (Potentially) Export aggregate feed to users
- (Potentially) Individual user accounts w/ SSO login



Chapter 2: Implementation Plan

2.1 Technology Stack

- Frontend: Plain HTML, CSS, JavaScript
- Backend: REST API, Database
- Database: User DB and Article/Feed DB
- Cloud Platform: CloudLab for deployment
- Version Control: GitHub repository (public)

2.2 System Components & Responsibilities

- Frontend: Developed by Yanxi and Chris
- Fetches data from the backend API
- Displays user-friendly UI
- Allows user interaction (subscription, feed management)
- Backend: Developed by Ellis and Gus (if applicable)
- Fetches RSS feeds
- Stores data in the database
- Provides REST API endpoints

2.3 Development Roadmap

- Week 1-2: Define requirements, set up GitHub repository
- Week 3-4: Develop frontend wireframes and backend API design
- Week 5-6: Implement database and core functionalities
- Week 7-8: Testing and deployment
- Week 9: Final debugging and documentation

2.4 Challenges and Risk Management

- Potential risks in project execution
- Contingency plans for technical challenges

Ellis Weaver-Kreider

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Work Experience

Production Crew, Mennocon
Kansas City, MO
National Convention for Mennonite Church USA July 2023
• Operated fixed and mobile cameras according to direction of video director
• Mixed audio for subsequent climate summit
• Worked closely with other volunteers and employees to ensure seamless experience for attendees

Tech Crew, Lancaster Mennonite School
Lancaster, PA
National Convention for Mennonite Church USA July 2023
• Operated fixed and mobile cameras according to direction of video director
• Mixed audio for subsequent climate summit
• Worked closely with other volunteers and employees to ensure seamless experience for attendees

Drama Production Crew, Lancaster Mennonite School
Lancaster, PA
Set construction, lighting, and sound for stage productions 2017 - 2023
• Worked with other students and alumni to construct complex sets including life-size building facades
• Helped lighting engineer hang and remove lighting fixtures
• Worked as primary audio engineer to mix all actors on stage and a band/pit orchestra for musicals
• Assisted Radio Frequency Technicians in miking and de-miking actors
• Operated sound effect system

Honors & Awards

Academic
• AP Scholar with Distinction
• PHEAA Certificate of Merit
• National Merit Scholarship Letter of Commendation

Programming
• 2024 PACISE Programming Competition – First Place
• 2024 International Collegiate Programming Competition – First Place Regional Division 2

Education

West Chester University of Pennsylvania
Pursuing B.S. in Computer Science
August 2023 - present

Lancaster Mennonite High School
August 2019 - June 2023

Yanxi Wei

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EDUCATION

West Chester University of Pennsylvania, West Chester, PA
Bachelor of Science in Computer Science, Graduation: Spring 2025
GPA: 3.9/4.0

Relevant Coursework :

- Computer Science I, II & III
- Foundations of Computer Science
- Data Structures and Algorithms
- Computer Systems
- Computer Security
- Data Science
- Digital Image Processing
- Program Lang Concepts/Paradigm
- Modern Web Applications

Honors and Achievements

- Dean's List, College of the Sciences and Mathematics (Fall 2024)
- Inducted Member of Upsilon Pi Epsilon (UPE) – The International Computer Science Honor Society (Spring 2025)

Technical Skills

- Programming Languages: Java, Python, C
- Web Development: HTML, CSS, JavaScript, REST APIs
- Cloud Technologies:Docker, CloudLab, Virtualization, Containerization
- Tools & Platforms: GitHub, IntelliJ IDEA, PyCharm, VS Code

ACADEMIC PROJECTS

Email Classification and Spam Analysis System, Team Project (Fall 2023)
Role: reader and Parser- Made CSV parser and reader.
Developed a CSV parser and reader for a spam classification system using a bag of words approach. Assisted in training the classifier to identify common words and phrases in spam and ham emails, and calculated accuracy and Euclidean distance metrics.
Worked with team members to integrate CSV reading with algorithm development for classification, ensuring clean data processing and accurate results.

Obesity Analysis Based on Socioeconomic Factors, Personal Project (Fall 2024)
Role: Data Analysis and Visualization
Conducted statistical analysis on the relationship between obesity rates in the U.S. and socioeconomic factors such as age, income, education level, and gender. Utilized the BRFSS dataset from the CDC and applied regression models, ANOVA, and interaction effect analysis to evaluate key influencing variables. Performed data preprocessing, statistical modeling, and visualization to derive insights for public health interventions, ensuring data-driven conclusions.

Additional Information

- Languages: English (Fluent), Chinese (Native)
- Interests: AI technology, Cloud Computing, Web Development, Data Science

Gus Johannesen

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www.linkedin.com/in/gus-jo

Professional Summary

Upcoming Computer Science graduate seeking employment. Hands-on experience in full-stack development, Agile workflows, and API integration. Highly motivated and eager to build high-impact software solutions. Strong collaborator with a proven ability to enhance digital experiences and drive engagement through innovative technology

Education

West Chester University of Pennsylvania
September 2021 – May 2025
Bachelor of Science in Computer Science West Chester, PA

Experience

JCI May 2024 - August 2024 West Chester, PA
Application Developer
• Developed full-stack solutions for the Cold Plunge app using Swift and Xcode.
• Collaborated with cross-functional teams in Agile workflows to meet milestones and maintain code quality.
• Enhanced SEO strategies and web traffic analytics to boost user engagement.

Hills Quality Seafood April 2021 – Present Glen Mills, PA
Sales and Operations Associate
• Manage customer transactions, product prep, and inventory for smooth operations.
• Took on leadership tasks, optimizing market workflows and managing high-volume holiday operations.
• Coordinated 300+ pre-placed orders, creating efficient systems for logging and retrieval.

Covenant Fellowship Church April 2021 - Present Glen Mills, PA
Technical Event Support
• Operate light-board software and train junior technicians.
• Design visual elements to enhance event ambiance and success.

Projects

Cold Plunge App
May 2024 - August 2024
• Developed key features using Swift/Xcode, transitioning from timer-based to real-time stopwatch.
• Collaborated on backend integration with Azure/GitHub for version control and deployment.
• Performed QA testing to identify and resolve bugs, ensuring a polished user interface.
Chesco Association for the Blind and Visually Impaired Website
August 2024 - December 2024
• Collaborated to improve UI/UX for accessibility and user-friendliness.
• Authored documentation for future updates and maintenance.
• Redesigned website pages, enhancing visual appeal and navigation.

Leadership / Campus Involvement

Campus Cru Sept 2021 - Present
• Plan and execute weekly meetings and community-building events.
• Serve and invest in the community, inspiring others.
Volleyball Coach Sept 2021 - May 2023
• Trained youth volleyball players, fostering a winning mentality.
• Strengthened the team physically and mentally.
Scouting BSA May 2015 - Mar 2021
Eagle Scout Troop 93
• Achieved Eagle Scout and served as a leader on the executive board.
• Demonstrated leadership, service, and perseverance.

Technical Skills

Languages: Java, Swift
Developer Tools: XCode, VS Code, Jupyter Notebook
Technologies/Frameworks: Git, GitHub, Azure DevOps

CHRIS K. ROSS

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Education

West Chester University of Pennsylvania | B.S. in Computer Science
August 2024 – present

Delaware County Community College | A.S. in Computer Science
August 2021 – May 2024

Interboro High School | Graduated with Honors September 2017 – June 2021

Work Experience

Chipotle
Service/Kitchen Manager | Multiple locations |May 2022 – present
• Led and trained teams of employees to deliver exceptional customer service and improve operational efficiency.
• Oversaw daily operations, including inventory management and compliance with health and safety standards.
• Collaborated with upper management to implement process improvements, reducing waste and increasing efficiency.

Projects

Text Processor
Developed a Java-based program that parses .txt files, extracts relevant data, and generates .csv files with summarized information to streamline data analysis.

Air-Traffic Control Simulator
Built a Java-based simulation that models air traffic patterns, managing multiple aircraft and simulating real-time control scenarios to ensure safe and efficient airspace coordination.

Relevant Coursework

• Foundations of Computer Science
• Computer Science I, II, & III
• Data Structures and Algorithms
• Computer Systems
• Computer Security & Ethics

Awards & Achievements

• Dean’s List Fall 2024, Spring 2024, Fall 2022
• 4.0 GPA