# Arjuna Herbst

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## Education

- **Gonzaga University** — Spokane, WA
  *Bachelor of Science in Computer Science* — *Aug. 2021 – May 2025*

## Experience

- **Gonzaga University** — Spokane, WA
  *Human Resources Assistant* — *Sep. 2021 - Sep. 2023*
  - **Job Function**: Created a competency framework for Gonzaga University's HR department, streamlining talent identification and skill development. Helped manage front desk, completed employment verification requests.
- **Minnesota State Referee Committee** — Saint Paul, MN
  *USSF Grade 8 Official* — *May 2018 - Sep. 2023*
  - **Job Function/Certifications**: Tasked with officiating youth soccer matches from the ages of 9-19 on self-contracted based scheduling. Concussion trained and SafeSport certified to diffuse any potential injuries.
- **Two Barrels** — Spokane, WA
  *SWE Student Team Lead* — *Sep. 2024 - May 2025*
  - **Applicant Tracking System**: Applicant Tracking System: Helped lead student team building a full-stack ATS using Ruby on Rails, Vue.js (with Devise auth and Vuex state), PostgreSQL, GitHub Actions CI/CD, and AWS deployment in a scrum team of 4. Mentored by full-time SWE during development.

## Projects

- **3D Portfolio Website**: Developed a one pager web application using Vite.js alongside Three.js for 3D model loading/rendering and animations. Utilized Vercel to deploy the application to be hosted on a personal domain at space.arjunaherbst.com
- **Gonzaga University Hackathon - 2021**: Led a team of 4 to scrape information from the Billboard Top 100 songs using Python. Used the Spotify API to find trends in these popular songs by collecting JSON and comparing with Spotify's most "danceable" songs.
- **Multiplayer Yahtzee**: Worked with a team of 4 to create a full-stack application mimicking the popular game Yahtzee. Utilized Java Swing to build a user friendly GUI in which users could play against the CPU or connect with up to 7 friends using sockets to play together.
- **NBA Data Analysis**: Implemented linear regression and KNN algorithm to find patterns in player data from the 2022-23 NBA season using Python/Pandas. Data visualization with Matplotlib and scikit-learn. Data storytelling using Jupyter Notebook within Google Colab.
- **Flavor Exchange**: React web application with Javascript components and Node.js backend calling a MySQL database to dynamically populate page content. User's are able to search for ingredients/recipes, add reviews, and update/remove items through the UI.
- **Blog Page**: Created a personal blog page with vanilla HTML/CSS/Javascript and Contentful Headless CMS. Hosted on Netlify. Provided access to CDN to full-time writer
- **Premier League Match Prediction**: Scraped and processed 2,281+ EPL matches from fbref.com using Python (requests, BeautifulSoup, pandas), engineered features and implemented Random Forest, KNN, and Decision Tree classifiers with pytest and GitHub Actions CI/CD, then deployed a Flask app on Render.
- **Subgraph Isomorphism Solver**: Built Python subgraph isomorphism implementations (naive backtracking & Bonnici-Giugno RI) with NetworkX, authored pytest unit tests and Matplotlib performance benchmarks, and automated reproducible setup via virtualenv.
- **Automated News Data Pipeline**: Developed a cloud-based Python application to scrape, aggregate, and analyze technology news from multiple APIs daily. Automated data collection using AWS Lambda and Docker, storing results in S3.
- **MyPL with Java**: Created programming language MyPL leveraging Java by writing the main components of a language: lexer, parser, IR code gen, type checker. Tested, compiled and built project files using Maven.

## Skills

- **Languages**: Python, Javascript, CSS, HTML, SQL, Java **Technologies**: AWS, GCS, React/Vue, Vite.js, Rails, Github — **Additional Skills**: Mandarin, Communication, Microsoft Office, Prompt Engineering