

Grady Arnold

gradyarnold.com | linkedin.com/in/gradyarnold | (865)-441-7654 | me@gradyarnold.com

EDUCATION

Purdue University

B.S Computer Engineering, minor in Mathematics

May 2024

West Lafayette, IN

- Trustees Scholarship
- Relevant coursework: Python for Data Science, Advanced C Programming, Object-Oriented Programming with C++, Data Structures

WORK EXPERIENCE

UnitedHealth Group

Software Engineer Intern

Jun. 2022 – Aug. 2022

Raleigh, NC

- Extended messaging system for internal developer site with 10,000s of active users
- Developed Spring Boot RESTful API in Java with Postgres database utilizing JPA and Hibernate types
- Created pages for Next.js frontend in Typescript, writing custom React hooks for effective state management
- Collaborated with peers on scrum-like team, engaging in sprint planning and leading team standups
- Wrote end to end integration tests with Cypress leveraging reusable test class methods

Purdue 3D Printed Prosthetics Club

Software Developer

Jan. 2022 – Present

West Lafayette, IN

- Led creation of web app to facilitate requests for and scheduling of 3D prints across organization
- Developed Next.js site, employing PostgreSQL database and Next.js REST API for storing print requests
- Composed custom React hooks for efficient state management and form control
- Designed automated email system with Twilio SendGrid to send users current request data on admin update
- Implemented user authentication with Clerk, as well as a custom admin system for print request management

PROJECTS

2048 Solver

C++, Python, CMake, CTypes

- Implements minimax with $\alpha\beta$ -pruning, monte carlo tree search and beam search algorithms to solve 2048 games
- Fabricated Python gui with Pygame which calls C++ functions from shared library through CTypes
- Created CMake build system and Python shared library loading system for cross platform compatibility
- Utilizes Python Asyncio library to execute input and move search loops concurrently with variable refresh rate

Twitter Sentiment Analysis

Java, JavaScript, Next.js, Spring Boot

- Web app to determine Twitter sentiment of news events by consuming Twitter and News APIs
- Constructed Spring Boot RESTful API backend, applying design patterns such as autowired singletons
- Built single page Next.js site that utilizes Chakra UI for efficient component design and styling
- Processes returned language with Sentiment Analysis in JS to indicate average attitude with a sentiment value

Personal Website

TypeScript, React, Next.js

- Portfolio website showcasing resume and relevant links written in TypeScript with Next.js
- Deployed with Vercel for efficient CI/CD pipeline on changes to repository

SKILLS & INTERESTS

- **Languages:** Python, C++, TypeScript, JavaScript, C, Java, SQL
- **Technologies/Other:** Linux, Git, Regex, Agile/Scrum, React, Next.js, Spring, Vim, Flask, OpenCV, CMake
- **Interests:** Mountain biking, ergonomic keyboards, Neovim config