Jake Kressley

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Education

University of Pittsburgh May 2026
Bachelor of Science - Computer Science *GPA: 3.64/4.0*

Relevant Courses: Software Quality Assurance, Software Engineering, Programming Languages for Web Applications, Data Structures & Algorithms, Discrete Structures, Linear Algebra, Intro to Systems, Computer Organization & Assembly

Experience

Software Engineer Intern June 2024 – August 2024
Advantexe Learning Solutions *Conshohocken, PA*

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- Designed and built interactive business acumen simulations in a cross-functional team using React and Bootstrap, transforming wireframes into deployed solutions with over 100 customer runs.
- Conducted thorough black box testing and fine-tuning of over 10 existing simulations to ensure high standards of accuracy and reliability.
- Orchestrated research and analysis to identify most effective of five charting APIs for internal use, streamlining integration for future projects.

Projects

JakeTube | *TypeScript, Next.js, Express.js, Docker, Firebase, Google Cloud*
- Created a YouTube clone app supporting user uploading and viewing using TypeScript and Next.js for a dynamic, responsive user interface, ensuring a seamless user experience.
- Implemented backend services allowing up to 10 GB in storage with Express.js, Firebase Functions, and Google Cloud Run, utilizing Google Cloud Pub/Sub for asynchronous communication and Google Cloud Storage.
- Utilized Firebase Auth for secure user authentication, allowing up to 50,000 document reads per day.

Reel Hot Takes | *TypeScript, React, TailwindCSS, FastAPI, MongoDB, BeautifulSoup*
- Developed a Python-based API with FastAPI and BeautifulSoup to scrape over 8000 movies from The Movie Database and gather Letterboxd user scores, seamlessly integrating with a React app and MongoDB for dynamic data retrieval.
- Leveraged TailwindCSS to streamline UI development and optimize frontend performance, incorporating react-toggle-dark-mode package for user-friendly dark mode functionality.

Movie Recommendation System | *Python, JupyterLab, Pandas, NumPy, Scikit-learn, Difflib*
- Designed a movie recommendation system using a dataset of 5,000 movies, employing cosine similarity and TF-IDF vectorization to process features such as genres, keywords, tagline, cast, director, vote average, and popularity.
- Enhanced user experience by allowing input of multiple favorite movies, aggregating similarity scores to provide personalized top 10 movie recommendations while excluding already provided movies.
- Implemented data preprocessing and feature extraction using Python libraries (Pandas, Scikit-learn, Difflib), ensuring accurate and efficient similarity computations and recommendations.

Skills

Languages: Python, Java, JavaScript/TypeScript, HTML/CSS
Technologies/Frameworks: Git/GitHub, APIs, Bootstrap, React, MongoDB, Node.js, Express.js, Tailwind CSS, FastAPI, Docker, Next.js