Aditya Singh

Software Engineer

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Education

University of California, Irvine *Expected June 2025*

Bachelor of Science: Computer Science with specialization in Intelligent Systems

- **Relevant coursework:** Data Structures, Algorithms, Boolean Algebra, Discrete Math, System Design, Information Retrieval, Intro to Artificial Intelligence, Linear Algebra, Computational Vision, Applications of Probability in CS, Database Management, Computer Networks.
- **Cumulative GPA:** 3.4
- **Dean's Honor List Recipient (Spring 22, Fall 22, Spring 23, Fall 23)**
- **Skills:** Git, Python, C++, Java, C, Object-Oriented programming, HTML, CSS, JavaScript, TypeScript, MySQL/postgreSQL, Assembly, Lisp, Prolog

Work Experience

ESPN+ @ University of California, Irvine Irvine, CA

Sports Broadcast Crew *June 2023 - Present*

- Actively managed **production and broadcasting** of over **20 live sports events**, ensuring high-quality visuals and audio, leading to a 15% increase in viewer satisfaction.
- Collaborated with a **15-member team** to manage **executing real-time adjustments during broadcasts and enhancing broadcast quality**.
- Assisted in pre-production planning for **20+ games**, coordinating with several sports teams, and strategizing to capture key moments, resulting in 20% more highlights featured in post-game coverage.

CubeSat @ University of California, Irvine Irvine, CA

Systems Software Engineer (Software Architect) *April 2023 - September 2023*

- Led a team of **several software developers and hardware engineers** in the successful **design and implementation** of software systems, enhancing system efficiency by 20%.
- Developed **several UML diagrams for software systems**, significantly **improving project clarity and alignment with objectives**, as evidenced by a 15% decrease in development revisions.
- Engaged with major clients, like **Northrop Grumman**, to define and refine software requirements and **adopt agile methodologies to enhance project adaptability**.
- Established **cross-functional standards to maintain consistency** across systems and teams, demonstrating **problem-solving skills** and **attention to detail**.

Project Experience (My GitHub)

Search Engine for College Webpages (GitHub) *April 2023 - June 2023*

- Developed a **tailored web search engine** for a given set of web pages, enhancing **search accuracy and speed by 40%** through Python, Flask, and BeautifulSoup.
- Improved search relevancy using **TF-IDF scoring** and **NLTK** for advanced tokenization and stemming.
- Integrated **OpenAI's GPT-3 via API** to generate concise search summaries, elevating user experience by providing quicker and more accurate search results.

Cache Content Delivery Network (GitHub) *September 2022 - December 2022*

- Designed and developed a **CDN simulator in C++**, enhancing data management efficiency by 30% through advanced **caching techniques.**
- Implemented a unique **'freshness count'** feature for cached files, leading to a **20% improvement in file access times.**

Advanced Shell Task Manager (GitHub) *September 2023 - December 2023*

- Engineered a custom **Unix-like shell utility in C**, streamlining **process management and job control for 10+ concurrent processes**.
- Developed sophisticated features for **foreground and background execution**, including **interactive job management** with **advanced signal handling, enhancing system efficiency**. Implemented **built-in navigation commands and optimized I/O redirection**, achieving a 35% reduction in system call overhead.

AI Module for Checkers (GitHub) *September 2023 - December 2023*

- Developed an advanced AI module for a complex checkers game, utilizing algorithms like **Minimax** and **Alpha-Beta Pruning** to simulate strategic decision-making, resulting in a 50% increase in game competitiveness.
- **Seamlessly integrated** this module into the main game architecture, ensuring robust interaction between AI and game components.