JOB APPLICATION PACKAGE

By: Samir Acharya

Job Description

Software Engineer Intern – Summer 2025
Google
Location: Mountain View, CA

Job Summary:
We are seeking a Software Engineer Intern to join our dynamic team. As an intern, you will have the opportunity to contribute to the development of innovative software solutions that impact billions of users worldwide. This internship will allow you to apply your technical knowledge, problem-solving skills, and creativity to real-world challenges in a collaborative environment.

Responsibilities:

- Design, develop, test, deploy, and maintain software solutions.
- Collaborate with cross-functional teams to gather requirements and develop solutions.
- Participate in code reviews, debugging, and performance optimization.
- Work with state-of-the-art technologies and contribute to open-source projects.

Minimum Qualifications:

- Currently pursuing a Bachelor's degree in Computer Science or a related technical field.
- Experience in programming languages such as Java, Python, or C++.
- Understanding of data structures, algorithms, and software development principles.
- Strong analytical and problem-solving skills.

Preferred Qualifications:

- Experience with web development frameworks and RESTful APIs.
- Familiarity with cloud technologies, containerization, and microservices architecture.
- Strong communication and teamwork abilities.

Related Coursework

1. **Data Structures and Algorithms**
   A foundational course focused on understanding, designing, and analyzing algorithms

and data structures. Topics include sorting, searching, graph algorithms, and dynamic programming.

2. **Software Development Lifecycle**
   Covers the stages of software development, including requirements analysis, design, implementation, testing, and maintenance. Emphasis on agile development practices.
3. **Web Development**
   An introduction to building responsive web applications using HTML, CSS, JavaScript, and frameworks like React.
4. **Database Systems**
   Explores relational database management, SQL, and database design principles. Hands-on labs include creating and managing databases.
5. **Machine Learning Basics**
   Covers supervised and unsupervised learning algorithms, data preprocessing, and model evaluation techniques.

Résumé

Samir Acharya

(202)-400-4175 | samir.acharya@bison.howard.edu | **Washington D.C.** | LinkedIn | GitHub

Programming Languages: Python, JavaScript/Typescript, Java, Kotlin, C++, HTML, CSS, SQL
Frameworks: React, MongoDB, Express.js, Node.js, Tailwind, NumPy, Pandas, matplotlib, scikit-learn, Tensorflow, Flask
Technologies: Git, AWS, PostgreSQL, REST, RPC, Protobuf, Android, Machine Learning

EDUCATION

Howard University (GPA: 3.8/4.0) **Expected Graduation: May 2026**
Bachelor of Science, Computer Science
Relevant Coursework: Data Structures and Algorithms, Computer Organization, Linux, Cloud Computing, Computer Networks, Discrete Structures, Calculus II
Awards: Capstone Scholarship Recipient, Dean's List for Spring 2023

WORK EXPERIENCE

Google **May 2024 - August 2024**
Software Engineering STEP Intern | Google Core - Zettastore AI Sunnyvale, CA
● Developed a Chrome Extension using TypeScript, saving 5 hours/week per on-call, resulting in annual savings of $M-MMs for Google.
● Built a C++ server to process RPC calls for a RAG LLM Agent, integrating a data pipeline and saving 100+ hours for on-calls while resolving 30% more queries per hour.
● Integrated the agent with an internal data pipeline, enabling usability and saving 100+ hours for on-calls across the team.
● Enhanced redundancy by implementing citation features in the chatbot, reducing time spent on repeated questions by 40% and improving on-call productivity by 80%.

Google **May 2023 - August 2023**
Software Engineering STEP Intern | Google Chat Team Sunnyvale, CA
● Led the development of a highly requested Google Chat Android App feature for 30,000+ users within the Google Workspace ecosystem, enabling the exchange of 20+ file types and impacting over 100,000 daily interactions.

● Wrote 2,500+ lines of Java/Kotlin code, managing 24 changelists, with 23 unit tests achieving 90%+ code coverage, significantly improving code reliability and reducing regression issues.
● Delivered the feature 2 weeks ahead of schedule, completing the project in 10 weeks instead of the planned 12, and accelerating the release cycle for future updates by 50%.
● Played a key role in shaping UI design and implementing future-proofing features, driving user satisfaction and scalability for increased file-sharing usage across teams.

PROJECTS

Chess Puzzle Discord Bot | ***(Python, Discord.py)*** **2024**
● Developed and deployed a Chess Puzzle Bot using Python, improving gaming and educational engagement for 200+ users on a school's Discord server.
● Leveraged the Discord.py library to seamlessly integrate the bot with Discord, ensuring its presence and functionality within the server.

Movie Recommender System | ***(Python, Pandas, scikit-learn, Flask)*** **2023**
● Built a content-based Movie Recommender System using cosine similarity, enhancing personalized recommendations for 500+ movie titles.
● Optimized data processing with Python, Pandas, and scikit-learn, delivering recommendations with a response time of under 1 second for users.
● Deployed the system using Flask to ensure user accessibility and seamless interaction.

E-Commerce Marketplace Platform | ***(MongoDB, Express.js, React, Node.js)*** **2023**
● Developed a feature-rich online marketplace, leveraging the MERN stack, to facilitate buying and selling of products.
● Designed and implemented a secure user authentication system using JWT (JSON Web Tokens) for seamless user registration and login.

ACTIVITIES

Scholar, Goldman Sachs Market Madness Program **Spring 2024**
● Enhanced financial skills and industry knowledge through an intensive curriculum and capstone competition.

Secretary and Highest Rated Chess Player - ***Howard University Chess Club*** **2023-2024**
● Led the team in major tournaments and coordinated club activities in the 2023-2024 academic year.

College Ambassador - ***Chess.com*** **2023-2024**
● Doubled the club membership and boosted social media following by 50% through regular events.

Member, Google Developer Student Club - ***Howard University Chapter*** **2022-2024**
● Enhancing technical skills and exploring emerging tech through workshops and collaborative projects.

Cover Letter

Recruiting Team
Google
1600 Amphitheatre Parkway
Mountain View, CA 94043

November 20, 2024

Dear Hiring Manager,

I am excited to apply for the Software Engineer Intern position at Google for Summer 2025. As a junior at Howard University majoring in Computer Science, I am eager to bring my passion for developing efficient and scalable software solutions to your team.

During my internship at Google's Core Zettastore AI team, I developed a Chrome Extension using TypeScript, which streamlined on-call workflows and improved accessibility for over 10

users, achieving an 80% satisfaction rate. I also contributed to building a C++ scaffolding server to process RPC calls for a Retrieval-Augmented Generation (RAG) LLM agent, significantly enhancing team productivity. These experiences honed my skills in software development and collaboration within a fast-paced, high-impact environment.

In addition to technical expertise, I bring a strong foundation in data structures and algorithms, demonstrated by my academic coursework. My experience with cloud technologies, RESTful API development, and database systems further equips me to contribute effectively to your team.

I am particularly drawn to Google's commitment to innovation and its emphasis on shaping impactful solutions for users worldwide. I would be thrilled to contribute to projects that align with my passion for scalable, user-centric software.

I look forward to the opportunity to discuss how my skills and experiences align with this role. Please feel free to contact me at samiracharya.swe@gmail.com or (123) 456-7890 to schedule an interview.

Thank you for considering my application.

Sincerely,
Samir Acharya

Memorandum

To: Prof. Harris
From: Samir Acharya
Subject: Job Application Package Reflective Memo
Date: November 20, 2024

The purpose of this memo is to explain the decisions I made while crafting my résumé and cover letter for the Software Engineer Intern position at Google.

Résumé:
I chose to focus on my internship at Google Core Zettastore AI because it highlights my ability to develop impactful software solutions in a professional environment. The inclusion of specific tools (TypeScript, C++) and achievements (improving team productivity by saving 100+ hours) demonstrates measurable success. Additionally, I structured the résumé to balance technical skills, academic background, and relevant experience, ensuring it reflects my readiness for the role.

Cover Letter:
The cover letter highlights my direct contributions during my previous internship at Google, showcasing my ability to solve complex problems and deliver results. I emphasized Google's

mission and my alignment with its innovative culture to establish a strong connection with the company. The organization of the letter ensures clarity and coherence, focusing on the most impactful experiences while keeping the content concise.

Format and Layout:
I adopted a clean, professional design for both documents, ensuring readability and alignment with industry standards. Bullet points were used in the résumé for clarity, while the cover letter followed a traditional format to maintain professionalism.

This package is designed to effectively convey my qualifications and enthusiasm for the role, maximizing my chances of securing the internship.

Sincerely,

Samir Acharya

B.S. Candidate, Computer Science
HowardUniversity