# Kaleab Abebe

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## Summary

Software Engineer proficient in Python, C++, and Java with hands-on experience in data analysis and AI projects. Improved AI model accuracy and managed complex projects while refining large language model outputs. Seeking to leverage strong fundamentals in data structures, algorithms, and agile development to design and deploy scalable software solutions.

## Education

**Georgia State University, Atlanta, GA**                                                          **Present**
*Bachelor of Science, Computer Science*
- **GPA:** 4.02
- **Achievements:** Campus Atlanta Scholarship

**Bunker Hill Community College, MA (Honors)**
*Associate Degree, Computer Science*
- **GPA:** 3.79
- **Coursework:** Software engineering, Fundamentals Of Data Science, Theoretical Foundations Of Computer Science, Computer Organization, System level programming, Big Data Programming, Operating Systems

## Work Experience

**Outlier AI**                                                                            **Jun 2025 - Present**
*Software Engineer, AI & Data Projects*                                                              *Remote*
- Analyzed and optimized prompts generated by large language models, applying full life-cycle software development practices to enhance clarity, accuracy, and usability.
- Developed and executed multi-scope projects involving AI evaluation, model output validation, and data quality assessment, leveraging Python and C++ to design and deploy scalable system components.
- Collaborated with cross-functional teams to apply problem-solving and technical expertise across diverse AI workflows, driving improvements in system performance and aligning project outcomes with organizational goals.

## Projects

**Purchase prediction tool**
- Developed a predictive analytics solution to forecast customer purchasing behavior for an online retailer.
- Utilized the "Customer Propensity to Purchase" dataset with 455 k records, employing binary-classification techniques.
- Designed Naive Bayes and Random Forest models, optimizing recall to enhance targeted marketing efforts.
- Implemented data preprocessing (random under sampling, feature selection) to improve model accuracy and performance.
- Processed data in Python 3 using pandas & scikit-learn; experiments run in Kaggle notebooks.

**NutriGuide - Nutrition tracker Web App**
- Built a full-stack, responsive application with Vue 3 (Vite), Node.js/Express, and PostgreSQL (Sequelize).
- Calculates personalized calorie & macro targets via the Mifflin-St Jeor equation and streams results to the dashboard in real time.
- Implemented JWT authentication, Tailwind-styled UI with dark mode, and offline data-persistence via local storage.
- Delivered dynamic calorie & macro tracking with personalized dashboards and groundwork for progress-charting.
- Allows users to log meals; nutrient totals and progress bars update instantly, supporting CRUD operations and offline persistence.

**Globally - Social Media App (Flutter)**
- Developed cross-platform app with Flutter & Dart; used Firebase (Firestore, Auth, Storage) for real-time backend.
- Implemented core Twitter-like features-posting text/media, like/dislike, follow/unfollow-plus a novel comment-free emoji interaction to reduce hostility.
- Owned backend architecture & Firebase security rules; integrated push notifications and real-time streams for cohesive client-cloud data flow.
- Served as backend lead in a 5-member team and shipped APK for internal testing ahead of public store release.

## Skills

- **Programming Languages & Tools**: Java, Python, C++, R, C, SQL, Assembly, HTML, JavaScript, Vue, Unix, Spark
- **Data Science & Analytics**: Spark, Machine Learning, Data Analysis, Passion For Data
- **Core Engineering Skills**: Data Structures, Algorithms, Software Design, Openness To New Technologies

## Achievements

- President's List (2022-2025) | Dean's List (2021, 2024) | CodePath Intermediate Interview Prep Certificate(2025) | Campus Atlanta Scholarship