

Saketh Bireddy

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Education

Purdue University <i>B.S. in Computer Science, Dean's List and Semester Honors</i>	May 2027 GPA: 3.74
<ul style="list-style-type: none">Relevant Coursework: Data Structures and Algorithms, Computer Architecture, Object-Oriented Programming in Java, Programming in C, Machine Intelligence, Systems Programming, Discrete Math, Linear Algebra	

Experience

Trimble Inc. <i>Software Engineer Intern</i>	May 2025 – August 2025 Princeton, NJ
<ul style="list-style-type: none">Implemented PostgreSQL database migrations on AWS EC2 via Python, improving CRUD for 50+ GIS analysts.Created a Jenkins CI/CD pipeline using Docker to clean 120k+ POI records, saving ~20 dev hours monthly.Wrote Python ETL script to extract shapefiles, redesign SQL tables, and auto-generate regional boundary views.Engineered a SQL monitoring system with AWS CloudWatch, Slack API alerts, and daily Matplotlib graphs, catching 90% of resource spikes 2x faster and lowering cloud expenses by \$2,000/year.	
IpserLab LLC <i>Software Engineer Intern</i>	August 2024 – December 2024 Remote
<ul style="list-style-type: none">Decreased e-commerce platform latency 35% by adding 5 RESTful Java APIs, endpoint validation via Postman, and improving HTTP load distribution with Apache Tomcat.Doubled concurrent session capacity to 200+ users by profiling Java modules and indexing critical Postgres queries.Constructed an XML configuration system with React and Stripe payments, resulting in a 10% faster checkout flow.	
Mingley <i>Software Engineer Intern</i>	June 2024 – August 2024 Remote
<ul style="list-style-type: none">Contributed to a social discovery mobile app (IOS/Andriod), enabling 100+ beta users to connect through proximity.Refactored the community page into React Native and Typescript, achieving 1.5x faster transition times.Integrated a C#/.NET data pipeline to process and store API data in PostgreSQL, cutting system error rates by 20%.	
John Deere <i>Data Science Intern - Purdue Data Mine</i>	January 2024 – May 2024 West Lafayette, Indiana
<ul style="list-style-type: none">Developed Python time-series forecasting models like S-ARIMA and Exponential Smoothing with JSON/CSV API support for 100,000+ part centers, reducing inventory costs by 10%.Eliminated 90% of unclean data through IQR outlier handling, null removal, and bucketing with Pandas and NumPy.Cut runtime by 5 minutes via automated model selection using seasonality tags with statsmodels and Scikit-learn.	

Projects

Huddle Social Next.js, React.js, Firebase, TypeScript, AWS
<ul style="list-style-type: none">Built the Huddle Social web app with Next.js, React, TypeScript, and Firebase Auth, serving 600+ users (30+ DAU).Accelerated signup flow by 25% with a Node.js scraper that auto-fills student names from a 10k+ Purdue directory.Deployed on Google Cloud Platform (Firebase Hosting + Cloud Functions) with HTTPS and environment configs.
Hack the Future Interview System React.js, Node.js, Express.js, MongoDB
<ul style="list-style-type: none">Built a system for the Purdue Hack the Future club to simplify interview management for 6 executive members.Implemented JWT-secured REST API in Express.js with Mongoose, achieving <50 ms interview form lookups.Lowered server boot time by 15% by containerizing backend and MongoDB using pre-built Docker images.
Custom Unix Shell C, C++, Flex/Bison, GDB, Valgrind, Linux POSIX API
<ul style="list-style-type: none">Programmed command parsing and execution in C/C++ with Flex/Bison, supporting I/O redirection and line editing.Leveraged Linux POSIX API (fork/exec, pipes) and kernels, ensuring 0 memory leaks over 1K GDB/Valgrind runs.

Technical Skills

Programming Languages: Java, Python, JavaScript, C, HTML, CSS, C#, TypeScript, Groovy, SQL
Frameworks & Libraries: React Native, React.js, Next.js, Node.js, Express.js, .NET, Pandas
Tools: Docker, Jenkins, Firebase, Figma, PostgreSQL, MongoDB, REST API, Git, AWS, GCP, Jira
Concepts: Backend Development, Frontend Development, Fullstack Development, Agile Methodology, CI/CD pipelines