

# Nicolas Cai

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## EDUCATION

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### Georgia Institute of Technology

Atlanta, GA

*Bachelor of Science in Computer Science, GPA: 4.00*

*Aug. 2021 – May 2024*

**Courses:** Data Structures & Algorithms, Algorithm Design, Artificial Intelligence, Advanced Computer Organization, Machine Learning, Systems & Networks, Operating Systems, Computer Vision, Processor Design, Databases, Automata & Complexity

## EXPERIENCE

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### ServiceNow

Santa Clara, CA

*Software Engineering Intern*

*May 2024 – Aug. 2024*

- Increased visibility on key metrics (including data volume shared, trust configurations, etc.) by developing suite of dashboards in **Javascript** within the multi-instance framework team
- Reduced metric collection wait times by 35% by creating additional metrics to cover areas like API request times and response status codes using Splunk query language and wrote integration tests to verify metric data in **Java**

### Georgia Institute of Technology, College of Computing

Atlanta, GA

*Teaching Assistant*

*August 2023 – May 2024*

- Created coding assignments and respective Gradescope autograders in **Java**, wrote Gradescope script in **Python** to check GitHub contributions, and answered Ed Discussion questions for over 900 students.
- Implemented application features and design patterns for course project using Android Studio (**Java**) in order to help students debug code and hosted demos and office hours to check students' progress during each semester.
- Nominated as an Outstanding Teaching Assistant by the School of Computing Instruction out of 200+ TAs.

### Capital One

McLean, VA

*Software Engineering Intern*

*June 2023 – Aug. 2023*

- Migrated existing Secured Card's customer deposit and return transaction process from AWS EMR to AWS Glue, a server-less alternative, for cheaper data extraction, transformation, and analysis using an Apache Spark cluster.
- Saved 60 % operational cost by writing a **Python** script stored in S3 to run ETL functionality in a Glue job scheduled daily using a CloudWatch trigger and deploying the workflow to a **Jenkins** pipeline.

### NCR Corporation

Atlanta, GA

*Software Engineering Intern*

*May 2022 – Aug. 2022*

- Developed Slack Analytics Bot using **Typescript** and **Node.js** server to give telemetry data collected internally.
- Trained Google Dialogflow natural language processing bot to provide analyses of traffic, monthly summaries, and insights during support or outages, decreasing query wait times by 90%; visually formatted for accessibility.
- Deployed bot in Google Cloud via Harness, containerized in **Kubernetes**, and versioned with Helm charts.

## PROJECTS

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### Maintenance Smart Calendar | *Python, FastAPI, React, AWS, DynamoDB*

*Jan. 2023 – May 2023*

- Automated the maintenance scheduling process for the Third Infantry Division of the US Army by assigning jobs to mechanics given their availability in a React web application.
- Created schemas for more than 1000 maintenance jobs and mechanics in a NoSQL database using DynamoDB and linked this data to a backend scheduling algorithm built on FastAPI.
- Deployed the application in an AWS cluster with DynamoDB for the database, an ECR repository for the backend, and an S3 bucket for static website hosting.

### Speech2Code | *Python, Flask, React, Express, HTML, CSS*

*May 2022*

- Developed web application that records English speech and translates it into functional code text using the AssemblyAI speech-to-text API.
- Built front-end in React.js and back-end in Python to extract meta language which was parsed and tokenized.
- Compiled code using Express.js and CodeX API for three languages—Python, Java, and JavaScript—and supported features including function declaration, datatypes, conditionals, and loops.

## SKILLS

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**Programming:** Python, Java, C, Javascript, Typescript, C++, SQL, Rust, C#, x86 ASM, HTML, CSS, Julia

**Frameworks:** React, Express.js, Node.js, FastAPI, Flask, DynamoDB, MongoDB, Postgres

**Tools:** Git, AWS Lambda, AWS S3, AWS Glue, AWS EMR, Jenkins, Jira, Android Studio, Docker, Kubernetes, Helm