

# Amit Kumar

SOFTWARE DEVELOPER

New York City Metropolitan Area, United States

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## Summary

I am a Software Developer with expertise in Software Development, HCI focused research, Conversational AI, and Google Cloud. Presently, I am working at Barclays, contributing to various projects spanning across critical technical deliveries, regulator projects, and platform enhancements.

## Work Experience

### Barclays

Whippany, NJ

SOFTWARE DEVELOPER

February 2023 - Present

- Implemented new features in the bank's core risk engine, improving functionality across asset classes and ensuring consistent performance.
- Designed a React Dashboard using TypeScript and Node.js, integrating JIRA and TeamCity to deliver real-time metrics and streamline collaboration.
- Developed and enhanced Python-based regression testing tools, automating cross-version consistency checks and improving release quality.
- Contributed to language bindings implementation using JNI, while utilizing scripting languages like Perl and Lua for fulfilling project requirements.
- Utilized technologies including C++, React, Python, Typescript, Node.js, Java, Perl, Lua, JIRA, GitLab, Bitbucket, Docker, and OpenShift.

### University of Florida (LearnDialogue Lab)

Gainesville, FL

GRADUATE RESEARCH ASSISTANT

May 2021 - December 2022

- Lead Software Developer:** Spearheaded the creation of a full-stack conversational AI development web application, AMBY, benefiting over 50 middle school students and providing impactful learning opportunities.
- Developed prototypes, focus group protocols, wireframes, and mockups for multiple research studies spanning around 70 middle school students.
- Analyzed and reported results from multiple usability studies, resulting in three conference publications and one journal article.
- Leveraged technologies such as React, MUI, Speech recognition, Dialogflow, Node.js, Express.js, MongoDB, AWS, Heroku, Figma, and SPSS.

## Skills

<b>Programming Languages</b>	C, C++, Java, Python, TypeScript, Erlang, Perl, Lua
<b>Frameworks &amp; Technologies</b>	React, MUI (Material UI), Node.js, Express.js, Git, JIRA
<b>Database</b>	SQL (MySQL), NoSQL (MongoDB), Hadoop
<b>Statistics &amp; Research</b>	SAS JMP, IBM SPSS, Regression, Usability Testing, A/B Testing
<b>Cloud Computing</b>	Amazon Web Services (AWS), Google Cloud, Openshift, Heroku

## Publications

- Y. Song, G.A. Katuka, J. Barrett, X. Tian, **A. Kumar**, T. McKlin, M. Celepkolu, K.E. Boyer, M. Israel, "AI Made by Youth: A Conversational AI Curriculum for Middle School Summer Camps". Paper in The Thirteenth Symposium on Educational Advances in Artificial Intelligence (EAAI). February, 2023.
- X. Tian, **A. Kumar**, C.E. Solomon, K.D. Calder, G.A. Katuka, Y. Song, M. Celepkolu, L. Pezzullo, J. Barrett, K.E. Boyer, M. Israel, "AMBY: A Development Environment for Youth to Create Conversational Agents". Journal article in International Journal of Child-Computer Interaction, 38, 100618.
- G.A. Katuka, Y. Augustine, Y. Song, X. Tian, **A. Kumar**, M. Celepkolu, K.E. Boyer, J. Barrett, M. Israel, T. McKlin, "A Summer Camp Experience to Engage Middle School Learners in AI through Conversational App Development". Paper in 2023 ACM Technical Symposium on Computer Science Education (SIGCSE TS).
- A. Kumar**, X. Tian, M. Celepkolu, M. Israel, K.E. Boyer, "Early Design of a Conversational AI Development Platform for Middle Schoolers". IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC), 2022.

## Honors & Awards

Mar 2023 **Best Paper Award**, A Summer Camp Experience to Engage Middle School Learners in AI through Conversational App Development

Toronto ON,  
Canada

Sep 2022 **\$3439 NSF travel funding**, Graduate Consortium participant at VL/HCC, 2022

Rome, Italy

## Education

### University of Florida

Gainesville, FL

MASTER OF SCIENCE, COMPUTER SCIENCE

2021 - 2022

GPA: 4.0/4

### Bennett University

India

BACHELOR OF TECHNOLOGY, COMPUTER SCIENCE ENGINEERING

2017 - 2021

GPA: 8.49/10