

# Ajay Brahmakshatriya

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## Education

September'20-Present	<b>Ph.D. in Computer Science, Massachusetts Institute of Technology</b>	5.0/5.0
September'18-September'20	<b>S.M. in Computer Science, Massachusetts Institute of Technology</b>	5.0/5.0
August'12-June'16	<b>B.Tech in Computer Science(Honors), IIT Hyderabad</b>	9.74/10

## Interests

Programming languages, Compiler and Systems research

## Publications

CGO'21	<b>BuildIt: A type based multistage programming framework for code generation in C++</b>
CGO'21	<b>Techniques for compiling graph applications for GPUs</b>
CGO'20	<b>PriorityGraph: A Unified Programming Model for Optimizing Ordered Graph Algorithms</b>
IISWC'19	<b>BHive: A Benchmark Suite and Measurement Framework for Validating x86-64 Basic Block Performance Models</b>
EUROSYS'19	<b>ConfLLVM: A Compiler for Enforcing Data Confidentiality in Low-Level Code</b>
GLOBECOM'16	<b>LWIR: LTE-WLAN Integration at RLC Layer with Virtual WLAN Scheduler for Efficient Aggregation</b>

## Work Experience

July'16-July'18	<b>Research Fellow, Microsoft Research India, Bangalore</b>
May'15-July'15	<b>Intern, Software Development Engineer, Amazon India, Bangalore</b>

## Current Research Projects

September'18-Present	<b>A Unified Graph Framework for Achieving High-Performance across Algorithms, Graph Types, and Architectures</b>
Advisor	<b>Prof. Saman Amarasinghe, Prof. Julian Shun</b> Generating efficient CUDA code for graph algorithms. New GraphIR for portable code generation across multiple platforms.
January'19-Present	<b>BuildIt: A type based multi-stage programming language extension for imperative languages</b>
Advisor	<b>Prof. Saman Amarasinghe</b> A type based multi-stage programming library for imperative languages like C++

Programming X86/64 Assembly, C, C++

Tools LLVM

Some of my projects are hosted at <https://github.com/AjayBrahmakshatriya>