Akash Mittal

+1.447.902.1250 | akashm3@illinois.edu | Indian citizenship

EDUCATION

UNIVERSITY OF ILLINOIS, URBANA-CHAMPAIGN (UIUC)
MASTERS IN COMPUTER SCIENCE
Aug 2022 – May 2024 | GPA: 4.0/4.0

INDIAN INSTITUTE OF TECHNOLOGY (IIT), DELHI
B.TECH IN COMPUTER SCIENCE
Aug 2015 – May 2019 | GPA: 9.2/10.0

- IITD Semester Merit Award for 3 semesters for academic excellence.

SKILLS

Programming:
Python• C • C++ • Android/Web Development • Spark • React • Django • GraphQL • Kotlin • PyTorch • SQL • AWS • GoLang

Project Experience
Big Data Analysis • XAI • Information Retrieval • Recommender Systems • Computer Vision • Deep Learning on Graphs • On-device ML • Mobile Sensing • Social Network Analysis

COURSEWORK

ML/AI/DATA SCIENCE
Artificial Intelligence
Machine Learning
Information Retrieval
Data Mining
Autonomous Vehicle Engineering
Deep Learning for CV

SYSTEMS/THEORY
Distributed Systems
ML for Large Scale DB Systems
Databases and Information Systems
Operating Systems
Parallel Computing
Analysis and Design of Algorithms
Networks
Computer Architecture*
Programming Languages
Smart Things
Algorithms for IoT and Data Science*
denotes served as Teaching Assistant

CONTACT

Github:// **akash17mittal**
LinkedIn:// **akashmittal1798**
Scholar:// **Akash Mittal**
Portfolio:// **akash-mittal**

INDUSTRY EXPERIENCE

LENSTALK | COFOUNDER — CHAMPAIGN, USA | OCT'22 - MAY'23
BRINGING PERSONAL AI ASSISTANTS TO THE PHYSICAL WORLD

- Developed the camera and motion sensors-based privacy-preserving mobile device identification & localization technology and filed a **US patent**.
- Pitched the idea at **COZAD 2023** - UIUC Venture Challenge.

SAMSUNG RESEARCH | RESEARCH ENGINEER — SEOUL, SOUTH KOREA
AWARDS

- **S/W Development Award** for improving code review culture of the team.
- Won **2nd place** in company-wide hackathon for designing an innovative note-taking application for foldable phones.

THINK TANK TEAM — CALIFORNIA, USA | MAY '23 - AUG '23
Working on Samsung's secret future products.

DEPLOY TEAM - LOCATION BASED INTELLIGENT SERVICES — JAN '21 - JUN '22
Built and commercialized ⬈ an **on-device machine learning** based indoor localization system being used by 1000s of users.

DATA INTELLIGENCE TEAM — SEP '19 - DEC '20
Developed novel scalable explainable AI algorithms, derived insights from hundreds of terabytes of Samsung Health log data, and developed music recommendation system (Placed in top-10 teams in the contest ⬈).

SELECTED INTERNSHIPS & PROJECTS

NATIONAL UNIVERSITY OF SINGAPORE — MAY '19 - JUN '19
ORIGIN DESTINATION (OD) MATRIX CALCULATOR FOR ROAD NETWORKS ⬈
Built a microservice for computing the shortest paths for location pairs over a complete Singapore road network achieving 10X speedup.

PURDUE UNIVERSITY — MAY '17 - JULY '17
AUTOMATIC GYM EXERCISE COUNTING SYSTEM ⬈
Developed a POC for deep learning based gym exercise (squats, pushups, etc.) counting system using surveillance cameras.

INNAV - INDOOR NAVIGATION SYSTEM ⬈ — MAY '16 - JULY '16

Developed an indoor navigation application for visually impaired people. Awarded **Design Innovation Award** by the MHRD (Government of India).

PUBLICATIONS AND PATENTS

1. A. MITTAL, T. Dai, D. Kang. **AIDB:** a Sparsely Materialized Database for Queries using Machine Learning. *Submitted in VLDB 2024.*

2. S. Manchanda, A. MITTAL, A. Dhawan, S. Medya, S. Ranu, and A. Singh. **GCOMB:** Learning Budget-constrained Combinatorial Algorithms over Billion-sized Graphs ⬈ *Neural Information Processing Systems*, 33, 2020.

3. A. MITTAL, R. Choudhury. Identification and Localization of Mobile Devices. Patent Application No.: 63/458,615. Filing date: April 11, 2023

4. A. MITTAL, H. Cho. Device for building a map for indoor space. Patent Application No.: KR2023/007198. Filing date: June 30, 2022