

# Gautam Choudhary

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## Education

**M.S. in Computer Science** 2022 – 2024 (Expected)

*Purdue University, USA*

Courses: Statistical Machine Learning, Deep Learning, Data Mining, Graph Learning, Randomized Algorithms

**B.Tech. Computer Science & Engineering** 2015 – 2019

*Indian Institute of Technology, Roorkee, India*

*GPA – 9.2/10.0*

★ Best Department Thesis Award ★ Class Rank: 3/81

## Research

**Interests:** Machine Learning (ML); Data Mining; User Modeling; Graph Representation Learning; Natural Language Processing (NLP)

### Publications\*

**PersonaSAGE: A Multi-Persona Graph Neural Network** [pdf] arXiv 2022

*Gautam Choudhary, Iftikhar Ahamath Burhanuddin, Eunyee Koh, Fan Du, Ryan A. Rossi*

**B2B Advertising: Joint Dynamic Scoring of Account and Users** [pdf] AdKDD 2022

*Atanu Sinha, Gautam Choudhary, Mansi Agarwal, Shivansh Bindal, Abhishek Pande, Camille Girabawe*

**ReAct: A Review Comment Dataset for Actionability (and more)** [pdf][data] WISE 2021

*Gautam Choudhary, Natwar Modani, Nitish Maurya*

### Patents\*

(1 Granted, 2 Published, 3 Filed)

**Identifying Bot Activity Using Topology-Aware Techniques** Mar 2022

*Gautam Choudhary, Sk Izajur Rahaman, Siba Panigrahi, Prithvi Bhutani, Manoj*

*Kilaru, Kanishk Singh, Iftikhar A. Burhanuddin, Aditi Singhania* USPTO 17/709,615

**Determining Digital Personas Utilizing Data-Driven Analytics** [Google Patents] Mar 2021

*Gautam Choudhary, Iftikhar A. Burhanuddin*

*USPTO 17/189,681*

\* For complete list, visit LinkedIn

## Selected Projects

**Persona Learning** Aug 2019 – Jul 2022

*Advisors: Dr. Iftikhar A. Burhanuddin and Dr. Ryan A. Rossi*

*Adobe Research*

Motivated by user modeling concepts in HCI, we investigate the research problem of identifying and learning user *personas* from historical data by applying data mining and graph-based deep learning techniques.

**B2B: Account Scoring** [news][video] May 2020 – Jun 2021

*Advisor: Dr. Atanu R. Sinha*

*Adobe Research*

This project involved modeling the conversion likelihood of business accounts in a B2B scenario using deep learning architectures. Also got featured in *Adobe Summit Sneaks 2021* - Adobe's worldwide flagship Digital Experience Conference.

**Actionable Review Comments** May 2020 – Aug 2021

*Advisor: Natwar Modani, Adobe Research*

*Adobe Research*

The project involved proposing a taxonomy for textual review comments along with their classification using natural language processing techniques. Also released a text-domain dataset.

**Design Automation for Microfluidic Devices** [report] Aug 2018 – May 2019

*Advisor: Dr. Sudip Roy, IIT Roorkee*

*IIT Roorkee*

We proposed a design automation approach for sample preparation of bioassays by developing a parallel and efficient algorithm for reagent placement on a 2D grid (Programmable Microfluidic Device).

## Work Experience

**The Data Mine**, Graduate Research Assistant | ML, Data Analysis Jan 2023 – Present

○ Mentor and assist in providing technical support across multiple data science and machine learning projects.

**Adobe Research, India**, Research Associate 2 | ML, Graph Learning, NLP Jun 2019 – Jul 2022

- Brainstorming and formulating new research problems with industrial use cases around marketing science, decision analysis, user experience, web analytics, etc.
- Prototyping solutions using ML techniques from data mining, representation learning, user modeling, etc.
- Writing academic publications for top-tier conference venues (and filing patents).
- Co-mentoring 6-8 undergraduate students every year as part of our research internship program.

**Adobe Research, Research Intern | NLP**

**Summer 2018**

- Worked in the domain of NLP on generating useful insights and visualizations for assisting authors to quickly grasp user feedback (comments) associated with their documents (blogs).
- Curated a dataset for a text classification problem and proposed a novel hierarchical text classifier.

**JS Tigers, Javascript Developer Intern | NodeJS, Angular**

**Winter 2018**

Worked on developing and adding new functionalities to a CRM Web App. Improved existing codebase by fixing bugs involving both frontend and backend.

**Saarthi AI, Backend Web Developer Intern | Django**

**Winter 2017**

Built web and mobile applications for an AI-based Tech Startup offering Chatbot services. Involved in full-stack development to integrate product features.

**Quiziential, Educational Content Developer Intern**

**Winter 2015**

Developed question bank in the domain of Science, Mathematics, and General Aptitude along with explanations for an educational platform.

## Honors and Awards

Winner in Web Technologies Project as part of New College Graduate Bootcamp, Adobe Inc.	<b>2019</b>
Best Undergraduate Thesis Award in Computer Science Department, IIT Roorkee	<b>2019</b>
Merit-cum-Means (MCM) Scholarship, IIT Roorkee	<b>2015 – 2019</b>
IIT-JEE Advance All India Rank (AIR) 1416 amongst ~ 150k+ candidates (Top 1%)	<b>2015</b>
Awarded Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship, Govt. of India	<b>2015</b>
Secured All India Rank (AIR) 17 in National Science Olympiad (NSO)	<b>2014</b>

## Computer skills

**Languages:** Python, C++, JAVA, HTML, CSS, Javascript,  $\LaTeX$

**Frameworks:** PyTorch, Deep Graph Library, Keras, TensorFlow, Flask, Angular, NodeJS

**Tools/OS:** Git, Visual Studio, Android Studio / LINUX (Ubuntu), MacOS, Windows

## Service

**Member of Recruitment Team | Adobe Research**

**2019 – 2022**

Volunteered for recruitment panel activities across various programs for empowering women students (Women-in-Technology Scholarship), students from underrepresented communities (GEM Fellowship), etc. to pursue their education.

**Volunteer at Adobe Create Change Day | Adobe Inc**

**2019 – 2021**

Actively engaged with Adobe's Corporate Social Responsibility (CSR) Team and volunteered for activities like fundraising for cancer patients, supporting NGOs and local Govts., helping shelter home children, etc.

**Student Mentorship Program | IIT Roorkee**

**2018 – 2019**

Mentored 7 freshman juniors in their academic and non-academic affairs as part of a mentorship program at IIT Roorkee.