Bhavesh Neekhra

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EDUCATION

PhD, *Ashoka University, India*	2018 – Present
M.E., *BITS, Pilani, India*	2007-2009
B.E.(Hons), *BITS, Pilani, India*	2001-2005

WORK EXPERIENCE

Research Fellow — **JUN 2021 — Present**
Ashoka Mphasis Lab, Ashoka University — *Sonipat, India*

- Generated country-scale synthetic population using a novel hybrid of statistical and machine learning models
- Led a team to collate, clean and make available cell gene expression data in a format usable for ML models (from open-sourced datasets)
- Using ML models in predicting cancer metastasis
- Ongoing work on the use of machine learning models on tabular medical data

Assistant Professor — **AUG 2015 — JUL 2018**
Presidency University — *Bangalore, India*

- Engaged since the inception of the university, helped set up various academic and administrative processes
- Taught various courses for students from the School of Engineering from 1st year to 4th year
- System administrator for Moodle (open-source learning management system), conducted online exams for university students, entrance exams for PhD students
- Provided technical expertise to the office of Controller of Examination to make exam results available online
- Provided technical expertise to the office of Practice School to develop an online portal to manage the entire workflow of students' internship

Tutor — **OCT 2012 — MAR 2015**
Gurukul — *Pichhore, India*

- Helped school children in learning problem-solving techniques
- Taught mathematics for students of class IX to class XII

Teaching Assistant — **AUG 2007 — JUL 2009**
BITS, Pilani — *Pilani, India*

- Assisted in teaching and development of various courses at the undergraduate level
- System administrator for mail Server for 5000 users running on LAMP stack
- Exam portal maintenance and development for the division of Work-Integrated Learning Programs (WILP)

Software Test Engineer — **JUN 2005 — DEC 2006**
Citrix Systems India Pvt. Ltd. — *Bangalore, India*

- Developed and maintained in-house software as a Member of the Networking DevTest team
- Worked on Regression testing and Unit testing for High-Availability (HA) feature of NetScaler device family
- Extensive experience working with LAMP stack

RESEARCH EXPERIENCE

BharatSim: An agent-based modeling framework for India
PLOS Computational Biology, 2024

Poster presentation titled "Machine Learning Methods for Enhanced Forecasting of Antiretroviral Therapy Demand in India"
Gupta-Klinsky India Institute, Johns Hopkins University, 2024

Poster presentation titled "Machine Learning Methods for Enhanced Forecasting of Antiretroviral Therapy Demand in India"
STEM Expo - "Caliper", Ashoka University, 2024

Poster presentation titled "FedTree: Federated Learning on Tabular Medical Data"
ICGA, 2023

Oral Presentation titled "SynthPop++: A Hybrid Framework for Generating A Country-scale Synthetic Population"
AI4ABM Workshop, ICLR, 2023

Oral Presentation titled "Generating Synthetic Population"
New in ML Workshop at ICML, 2022

Error analysis in the reconstruction of a parabola in 3D from two arbitrary perspective views
Proc. SPIE 5675, Vision Geometry XIII, 2005

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Talks/Seminars

"BharatSim: An agent-based modelling framework for India"
1st Agent-based Modeling India Workshop, IIM Kozhikode, March 2025

"Monkeys on Typewriters: Is Feature Selection Useful for high-dimensional Data?"
CS Colloquium, Ashoka University, 2024

"Tech, Data and CS"
Young Scholars Programme: Tech, Data Computer Science, Ashoka University, 2024

Internships

DevTest Intern JUL 2004 — DEC 2004
Netscaler Pvt. Ltd., Bangalore, India

- Test Automation for High Availability using PERL modules
- Responsibilities included writing test plans and test scripts(Using PERL) for High Availability (HA) feature of NetScaler device family

Intern MAY 2003 — JUL 2003
Chambal Fertilizers and Chemicals Ltd, Kota, India

- Relay co-ordination studies using ETAP
- Conducted literature survey for relay coordination between the primary and secondary relay
- Analysis using ETAP (Electrical Transient Analyzer Program) software

Skills

Machine Learning/Data Science	NumPy, Pandas, SciKit-learn, Excel
Programming Languages	C, Python, PHP, Perl, R
Tools	Git, LaTeX
Other	MySQL, LAMP administration, Web Content Development and Management
Communication	Hindi (Mother tongue), English(fluent), French (basic)

Professional Activities

Reviewer for the Tiny Papers at ICLR	2024
Attended the workshop on Computing Research in Curricula: Knowledge, Education & Training conducted at IITGN	Feb 2024
Member of Program Committee for the Table Representation Learning (TRL) workshop at NeurIPS	2023
Graduate Teaching Assistant for AI/ML Winter School organised by Princeton University and Ashoka University	Dec 2022
Volunteered at ICML	Jul 2022
Volunteered at ICLR	Apr 2022
Volunteered as Tech Producer for Teleconference Sessions and HelpDesk Operations at GECCO	Jul 2021
Volunteered at Big Data Analytics (BDA) Conference	Dec 2020
Placement volunteer for the Computer Science Association (CSA), BITS, Pilani	Jan-May 2005

Awards and Achievements

Shared 1st Position in National level C Programming contest 'Smash the BUG' held during APOGEE, BITS, Pilani	Mar 2005
Shared 1st Position in National level C Programming contest 'CHAOS' held during APOGEE, BITS, Pilani	Mar 2004
Merit Cum Need Scholarship holder at BITS-Pilani during First Degree	2001-2005
Secured 1st rank in Madhya Pradesh State Board's Merit List in class XII	2001
Won 1st Prize in an Essay writing competition organized by the Ministry of I&B, Govt. of India in class XII	2001
Secured 39th rank in Madhya Pradesh State Board's Merit list in Std. X	1999

Miscellaneous

Actively participated in events/competitions organized in Citrix Systems India Pvt. Ltd., Bangalore, India	2005 – 2006
Acted in a stage play during a Theatre workshop organized by Hindi Drama Club, BITS, Pilani, titled **Til ka Tad**	2005