

Nalin Chhibber

GRADUATE STUDENT RESEARCHER

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Overview

I am a research based Master's student in David R. Cheriton School of Computing Science at the University of Waterloo. My research interests lies on the intersection of Human-AI Interaction and Intelligent User Interfaces. I am currently studying how to effectively combine Human and Artificial Intelligence to argument teachers in K-12 classrooms.

Education

M.Math. in Computer Science

University of Waterloo, Ontario, Canada

ADVISOR: EDITH LAW (HUMAN COMPUTER INTERACTION GROUP)

Sept 2017 - Present

B.Tech. in Computer Science and Engineering

Indraprastha University, New Delhi, India

ADVISORS: CHARU ARORA (MSIT), GOPAL KRISHNA PATRA (CSIR-4PI)

Aug. 2010 - Jul. 2014

Experience

Google Summer of Code

Waterloo, Canada

STUDENT DEVELOPER FOR AIMACODE

May. 2018 - Aug. 2018

Worked with Peter Norvig (Director of Research at Google) to design and implement a student-instructor workflow for a new platform. The platform hosts aimac-exercises for the fourth edition of the book 'Artificial Intelligence: A Modern Approach'

University Of Waterloo

Waterloo, Canada

GRADUATE RESEARCH AND TEACHING ASSISTANT

Sept. 2017 - Present

As a Graduate Research and Teaching Assistant, I have assisted course instructors from advance undergrad courses (CS 330, CS 490, CS 349, CS 348) by automating assignments, grading, proctoring and conducting weekly personal consultations for students.

Compro Technologies

New Delhi, India

FULLSTACK SOFTWARE ENGINEER

Oct. 2014 - Aug. 2017

I was part of the primary development team and worked on the full technological stack for web and mobile applications. I was involved in creating next generation e-learning products (e-reader, courseware) for better user engagement and achieve pure learning vision.

CERN, GS-Scientific Information Service

Geneva, Switzerland

SUMMER STUDENT INTERN

June. 2014 - Aug. 2014

Worked at GS-Scientific Information Services group to enrich exiting metadata with data from other libraries and integrate changes into the open source software 'invenio'. Updated metadata was made available on CDS (CERN Document Server) after the internship.

CSIR-Fourth Paradigm Institute

Bangalore, India

RESEARCH INTERN, SPARK

Aug. 2013 - Dec. 2013

Worked with Gopal Krishna Patra (Principal Scientist, CSIR 4PI) to create a secure cryptosystem inspired by chaos theory. This was a part of CSIR-SPARK (Student Program for Advancement in Research Knowledge).

Skills

Languages

C/C++ **JavaScript** SQL Shell Scripting HTML/CSS

L^AT_EX JAVA **NodeJS** NoSQL **Python** Markdown Processing

Publications

Typealike: Typing-Friendly Command Postures

SUBMITTED TO ACM CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS (SIGCHI)

Nalin Chhibber, Edith Law, Daniel Vogel

Glasgow, Scotland

Conference in May. 2019

Expression of Curiosity in Social Robots: Design, Perception, and Effects on Behaviour

SUBMITTED TO ACM CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS (SIGCHI)

Jessy Ceha, Nalin Chhibber, Edith Law, Dana Kulic, Joslin Goh, Pierre-Yves Oudeyer, Corina McDonald

Glasgow, Scotland

Conference in May. 2019

Human Perception of Surprise: A User Study

WORKSHOP ON COMPUTATIONAL SURPRISE IN 41TH ACM CONFERENCE ON RESEARCH AND DEVELOPMENT IN INFORMATION RETRIEVAL (SIGIR)

Nalin Chhibber, Rohail Syed, Mengqiu Teng, Joslin Goh, Kevyn Collins-Thompson, Edith Law

Michigan, USA

Jul. 2018

Prototype Tasks: Improving Crowdsourcing Results through Rapid, Iterative Task Design

PRESENTED ON 5TH AAAI CONFERENCE ON HUMAN COMPUTATION AND CROWDSOURCING (HCOMP)

Snehalkumar 'Neil' Gaikwad, Nalin Chhibber, Vibhor Sehgal, Aipta Ballav, Catherine Mullings, Ahmed Nasser, Angela Richmond-Fuller, Aaron Gilbee, Dilrukshi Gamage, Mark Whiting, Sharon Zhou, Sekandar Matin, Senadhipathige Niranga, Shirish Goyal, Dinesh Majeti, Preethi Srinivas, Adam Ginzberg, Kamila Mananova, Karolina Ziulkoski, Jeff Regino, Tejas Sarma, Akshansh Sinha, Abhtranu Paul, Christopher Diemert, Mahesh Murag, William Dai, Manoj Pandey, Rajan Vaish and Michael S. Bernstein

Quebec, Canada

Oct. 2017

Crowd Guilds: Worker-led Reputation and Feedback on Crowdsourcing Platforms

IN PROCEEDINGS OF THE 20TH ACM CONFERENCE ON COMPUTER SUPPORTED COOPERATIVE WORK AND SOCIAL COMPUTING (CSCW)

Mark E. Whiting, Dilrukshi Gamage, Snehalkumar 'Neil' Gaikwad, Aaron Gilbee, Shirish Goyal, Aipta Ballav, Dinesh Majeti, Nalin Chhibber, Angela Richmond-Fuller, Freddie Vargus, Tejas Seshadri Sarma, Varshine Chandrakanthan, Teogenes Moura, Mohamed Hashim Salih, Gabriel Bayomi Tinoco Kalejaiye, Adam Ginzberg, Catherine Mullings, Yoni Dayan, Kristy Milland, Henrique Orefice, Jeff Regino, Sayna Parsi, Kunz Mainali, Vibhor Sehgal, Sekandar Matin, Akshansh Sinha, Rajan Vaish, Michael S. Bernstein

Oregon, USA

Feb. 2017

Boomerang: Aligning Worker and Requester Incentives on Crowdsourcing Platforms

IN PROCEEDINGS OF THE 29TH ACM SYMPOSIUM ON USER INTERFACE SOFTWARE AND TECHNOLOGY (UIST)

Snehalkumar (Neil) S. Gaikwad, Durim Morina, Adam Ginzberg, Catherine Mullings, Shirish Goyal, Dilrukshi Gamage, Christopher Diemert, Mathias Burton, Sharon Zhou, Mark Whiting, Karolina Ziulkoski, Aipta Ballav, Aaron Gilbee, Senadhipathige S. Niranga, Vibhor Sehgal, Jasmine Lin, Leonardy Kristianto, Angela Richmond-Fuller, Jeff Regino, Nalin Chhibber, Dinesh Majeti, Sachin Sharma, Kamila Mananova, Dinesh Dhakal, William Dai, Victoria Purynova, Samarth Sandeep, Varshine Chandrakanthan, Tejas Sarma, Sekandar Matin, Ahmed Nasser, Rohit Nistala, Alexander Stolzoff, Kristy Milland, Vinayak Mathur, Rajan Vaish, Michael S. Bernstein

Tokyo, Japan

Oct. 2016

Synchronization of Chaos in Multiple Three-Dimensional Chaotic Maps

IN PROCEEDINGS OF IEEE INTERNATIONAL SYMPOSIUM ON TECHNOLOGY MANAGEMENT AND EMERGING TECHNOLOGIES (ISTMET)

Nalin Chhibber, Gopal Patra

Langkawi, Malaysia

Aug. 2015

Enriching the metadata on Cern Document Server

CERN DOCUMENT SERVER INTERNAL NOTE

Nalin Chhibber, Javier Martin Montull, Tullio Basaglia, Jens Vigen

Geneva, Switzerland

Aug. 2014

Projects

Curiosity Notebook: Framework to effectively combine Human and Artificial Intelligence to assist teachers in K-12 classrooms. The idea is to augment human teachers (not replace them) by means of virtual teaching assistants that can keep students engaged even outside classrooms. This is an active research project led by professor Edith Law in the University of Waterloo HCI lab.

Typealike Interactions: Typealike is an input technique that uses computer vision and machine learning to identify simple hand postures over the keyboard surface. It supports hand postures which can augment keyboard operations by triggering commands or activating additional input modes without disturbing the natural typing flow.

StoryKart: An educational platform to craft and share interactive stories. Includes simple drag-drop interface with script-editor to create animated stories. This project was inspired from Scratch: the visual programming language, but specifically focused on strengthening story building skills in kids.

Cosmic Shooters, MarkdownJS, Tweebbles and ChatJS are some other projects I built. I am also active on online developer communities like Stackoverflow (6000+ reputation, 25 badges, 5 bounties) and contribute to open-source projects (KDE, AIMACode, Stanford Crowdresearch, Python FOSSEE TBC).