

SUMIT KUMAR

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EDUCATION

- Master of Science in Analytics, GPA - 4.0** Dec 2018
The University of Chicago, Chicago, Illinois, USA
- Bachelor of Computer Science and Engineering, GPA - 3.8** July 2010
Maharshi Dayanand University, Rohtak, India

WORK EXPERIENCE

Amazon HQ, Seattle, Washington

- Research Scientist II - Alexa AI** Jan 2019 - Present
- Currently working on a research project for detecting false wake words and false invocations for Alexa Communications org.
 - Semi-Supervised Consistency training and Annealing to reduce dependence on large amount of labelled customer data
 - Contextual point-of-view conversion for Alexa messages (Text Generation)
 - I am also a member of the Alexa Comms ML Samurais team where I help other teams in developing their Machine Learning based solutions by hosting consulting sessions, modeling peer reviews, monthly newsletters etc.
- Software Development Engineer II - Amazon Fire TV, Devices Org** Aug 2018 - Dec 2019
- Developed an algorithm for improving the station matching process on FireTV devices.

- Research Computing Center, The University of Chicago** Nov 2017 - Jul 2018
Student Research Assistant (Part-time)
- Creating data visualizations and Python backend for university hosted portals, based on Django/Flask Python frameworks.

- Samsung Research Institute, Noida, India** Nov 2012 - Aug 2017
Lead Software Engineer, Advanced Technology R&D Engineer
- Directional Audio recording via Beamforming & Blind Source Separation via Independent Component Analysis.
 - Developed Quick Network Access (QNA) algorithm for mobile handsets in Roaming Area.
 - Worked on Smart Power Optimization Techniques (SPOT) project for improving the power footprint of mid and low segment handsets.
 - Lead Networking Layer team for Call Drop Reduction Task Force (CDR), pan-India project.

- Aricent Group, Gurgaon, India** Jan 2011 - Nov 2012
Software Engineer, NSN unit
- Radio and Core Network Emulator development; client: Nokia Siemens Networks, Finland

TEACHING EXPERIENCE

- Graham School, The University of Chicago** Jul 2018 - Present
Course Developer and Instructor for the online DABP14000, Advanced Analytics and Machine Learning (<http://bit.ly/MyUChicago>)
- I created and taught this course in the online "Data Analytics for Business Professionals" certificate program at UChicago.

- Professional and Continuing Education, The University of Washington** Jul 2018 - Present
Course Instructor for the Py230, Internet Programming with Python. (<http://bit.ly/UWPython>)

- Amazon Machine Learning University, Seattle - Washington** Nov 2018 - Present
Teaching Assistant for the multiple ML University courses.

ACADEMIC PROJECTS

- **Industry partner - Uptake:** Object and infrastructure detection using Deep Learning algorithms on SpaceNet data, and automated mapping of infrastructure using the remote sensing imagery.
- Recommendation Algorithms based on user data collected from meetup.com API.
- Android app: Image classifier (CNN) based on transfer learning using Tensorflow on Stanford's cars dataset.

PERSONAL PROJECTS

- UC Grabber, Google Chrome plugin to bulk download course content from university portal for University of Chicago students.
- Slack Bot: Leo is a Slack chat-bot that utilizes Google's URL shortening and AWS's SNS services.

PATENTS

- "Method and System for Deferred Data Communication". (<http://bit.ly/sumitpatent01>) (international)
- "Method and System for State Preservation of an Application in a Computing Device".(international)(<http://bit.ly/sumitpatent02>)
- "Method and System for managing context across applications". (international)
- "Method and system for achieving directional audio", "Method and Device for Contextual execution of an App" etc.

ACHIEVEMENTS & AWARDS

- Winner of the "Best Hack for Social Good" (Sponsored by JPMorgan Chase), Award at the Uncommon Hacks, 2018. (bit.ly/2018uc)
- Received multiple 'SRI-N Innovator', 'Inventor of the Month' and 'Employee of the Month' awards at Samsung Research Institute.

CERTIFICATIONS

- Udacity NLP Nanodegree, Andrew Ng's 5-course specialization in Deep Learning (deeplearning.ai), Fast.ai Course 1 and 2.

SKILLS AND LANGUAGES

Technical: Data Structures, Algorithms, CVS/Git/Perforce, GDB, Unix/Linux, Machine Learning, Deep Learning, NLP.
Programming Languages: C, C++, Java, Python (including Django and Flask), R, MySQL, Neo4j, JavaScript.