Sachin Salim

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EDUCATION

University of Michigan, Ann Arbor, MI
Masters - Data Science and Machine Learning, Electrical and Computer Engineering *Aug 2022 - Dec 2023*
Grade: 4.00/4.00
Courses: Computer Vision (A+), Matrix Methods for ML, DS (A+), Data Manipulation (A+)

Graduate Certificate in Computational Neuroscience *Jan 2023 - Dec 2023*
Courses: Neural Engineering (A+), Computational Neuroscience*

Indian Institute of Technology Kanpur, India *July 2014 - May 2018*
Bachelor of Technology - Computer Science and Engineering

RESEARCH EXPERIENCE

Draelos Lab, University of Michigan *May 2023 – Present*
Research Assistant | Mentor: Dr. Anne Draelos
- Topic: Real-time behavioral analysis on octopus arm using transfer learning and streaming dimension reduction
- Implemented pose estimation using DeepLabCut and unsupervised analysis using procrustean SVD

Cortical Neural Prosthetics Lab, University of Michigan *Jan 2023 – Apr 2023*
Research Assistant | Mentors: Dr. Cynthia Chestek, Joseph Costello
- Topic: Predicting simulated prosthetic finger kinematics in non-human primates using Reinforcement learning
- Implemented a closed-loop control system achieving 99.7% success rate in simulations using Gym and RLlib-Ray

Movement Control Lab, Indian Institute of Science, Bengaluru, India *Oct 2020 - Dec 2020*
Research Intern | Mentors: Dr. Aditya Murthy, Dr. Varsha Vasudevan
- Topic: Role of internal fast feedback controls in hand movement using inter-trial variability across amplitudes

Computational Economics Lab, Indian Institute of Technology Kanpur, India *Jan 2018 - Apr 2018*
Undergraduate Researcher | Mentor: Dr. Swaprava Nath
- Topic: Quantifying the social welfare by simulating a group of passengers choosing b/w sharing ride and riding solo

PROFESSIONAL EXPERIENCE

Skellam AI, Bengaluru, India *Aug 2021 - Aug 2022*
Applied Machine Learning Engineer
- Created a marketing automation tool featuring hyper-personalized recommendations using collaborative filtering
- Implemented activity tracking system for anonymous customers, boosting quarterly revenue by 130%

Adobe Inc., Noida / Bengaluru, India *June 2018 - July 2021*
Software Development Engineer – 2
- Collaborated cross-functionally with managers, design team, and engineers to develop 'Adobe Captivate'
- Implemented a space-efficient solution using shape objects for incorporating text, reducing build size by 27%.

Samsung R & D, Bengaluru, India *May 2017 - July 2017*
Software Development Intern

FELLOWSHIPS & ACHIEVEMENTS

KVPY - Young Scientist Incentive Fellowship, Dept of Science and Technology, Govt of India, 2013-2014
Qualified to national stage in **Maths, Physics and Chemistry Olympiads** conducted by Govt of India, 2014
Secured Rank 583 among 1.3 Million candidates in JEE Main - Indian Engineering Entrance Exam, 2014

TEACHING

EECS 504: Graduate Computer Vision, Robotics, University of Michigan *Aug 2023 – Present*
Graduate Student Instructor | Primary Instructor: Dr. Jason Corso

EECS 442: Computer Vision, Computer Science & Engineering, University of Michigan *Jan 2023 – Apr 2023*
Graduate Student Instructor | Primary Instructor: Dr. David Fouhey

TALKS

Real-time behavioral analysis on octopus arm using transfer learning and streaming dimension reduction

- Neural Networks Journal Club, University of Michigan *March 2023*

PROJECTS

Brain Tumor Segmentation using an ensemble of 3D U-Nets *Oct 2022 - Dec 2022*
Parkinson's Disease Progression Prediction *Feb 2023 - Apr 2023*
Seizure Detection and Closed-Loop Control *Mar 2023 – Apr 2023*
Breaking a Visual CAPTCHA *Jan 2017 - Apr 2017*
Quora Question Duplication *Feb 2018 - Apr 2018*

OUTREACH ACTIVITIES

Volunteer, **BrainsRule!** - Outreach project to get middle schoolers excited about brain *Mar 2023*
Member, **Neural Networks Journal Club** *Jan 2023 – Present*
Member, **Translational Neural Engineering Journal Club** *Jan 2023 – Present*

SKILLS

Languages: Python, C/C++, Java, JavaScript, MATLAB, SQL, Julia
Technologies: PyTorch, Neuron, COMSOL, Jupyter, AWS, Git/GitHub, Simulink, LaTeX
Coursera: Computational Neuroscience (U of Washington), Visualizing Data with Python (U of Michigan)

REFERENCES

Anne Draelos (University of Michigan) adraelos@umich.edu
Cynthia Chestek (University of Michigan) cchestek@umich.edu
Swaprava Nath (IIT Bombay/Kanpur) swaprava@cse.iitb.ac.in
David Fouhey (NYU/University of Michigan) david.fouhey@nyu.edu