Sanchay Kanade

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EDUCATION:

Master of Science Computer Science | Rutgers University, New Brunswick Sept 2022 – Apr 2024
Relevant Courses: DSA, OS Design, DBMS, Introduction to AI, Design of Internet Services

B.Tech in ECE | Maulana Azad National Institute of Technology, Bhopal | **8.34/10** GPA Apr 2016 – Jul 2020
Relevant Courses: Computer Programming Language, Data Structure Algorithms, TCP/IP, Computer Network, Computer Vision, Digital Image Processing

TECHNICAL SKILLS:

Languages: C++, Java, Perl, Python, JavaScript, SQL, PL/SQL, HTML, CSS, React.js, Node.js, Bootstrap
Framework: Django REST Framework
Database: Oracle Database, MongoDB
Tools: TensorFlow, Docker, Kubernetes, OpenCV, NumPy, Pandas, Agile, UiPath, Perf, Lframe, MATLAB

PROFESSIONAL EXPERIENCE:

Oracle, Bangalore **Product Software Engineer and Developer** Sept 2020 – Jul 2022
Mentor: Manoj Sahoo, Archana Singh

- **LOB and Text Index Performance Analysis and Development,** Oracle, Bangalore Sept 2020 – Jul 2022
  Developed, experimented and analysed impact of Large Object and Oracle Text Index features on performance of Oracle database using various performance tools and improved code for resolution of performance bugs resulting in 20x improvement using Python, C++ and SQL.
- **Oracle Text DML Performance and API Enhancements,** Oracle, Bangalore Sept 2021 – Nov2021
  Experimented, tested and analysed impact of enhancing DML operations by using background jobs to sync text indices, on the performance of Oracle database resulting in 10x performance optimization.
- **Testing Automation,** Oracle, Bangalore Dec 2020 – Jan 2021
  Automated entire testing process for LOB and Text Index area and created an automatic mailing system which can directly inform performance engineers about new regressions, using Linux Cron utility, Python, PL/SQL, Shell Scripting, HTML, CSS and MIME library.
- **Web Application Development**, Oracle, Bangalore Nov 2020 – Jul 2022
  Designed and developed application for performance regression analysis and filing bugs using HTML, CSS, JavaScript, PL/SQL, Node.js and Oracle APEX.

Rutgers University, New Brunswick **Teaching Assistant and Grader** Oct 2022-May 2022
Mentor: Professor Eiman Ahmed

- Teaching assistant and grader for class of 30 students in Object Oriented Programming course in School of Communication and Information

Indian Institute of Technology, Delhi **Global Research Intern** May 2019 – July 2019
Mentor: Professor Subrat Kar

- **Computer Vision and Object Tracking** May 2019 – July 2019
  Strategically developed a general-purpose algorithm to detect, count and track near circular objects on different background with camera motion, so that they can be used in industrial applications like medical, astronomical and machine perception, using image processing, object detection and object tracking (OpenCV, Python, MATLAB).
- **Respiration Monitor** May 2019
  Designed and developed a system to generate data from cheap IOT based wearable respiratory device which monitor sleep apnoea patients and push the data to Amazon web services database for analysis. (Python And Amazon Web Services).

INDEPENDENT PROJECTS:

- **Operating System Design,** Rutgers University, New Brunswick Oct 2022 – Dec 2022
  Implemented scheduler, user level Malloc and file system of an Operating system using C/C++.
- **B+ Tree and Query Executors**, Rutgers University, New Brunswick Oct 2022 – Dec 2022
  Implemented B+ tree-based indexing and hash join, nested loop join and filtered sequential scanners.
- **Traffic Volume Analyzer,** Maulana Azad National Institute of Technology, Bhopal Jan 2019 – July2020
  Mentor: Dr. Vijayshri Chaurasia Team size: 5
  Designed and developed a system and an algorithm to determine the count, type and direction of traffic, using deep learning (YOLO Neural Network) and computer vision (OpenCV and Python), so that traffic engineers can determine the volume of traffic on the road and implemented it on Raspberry Pi Microcontroller.
- **Azad 1 Nano Satellite Project**, Maulana Azad National Institute of Technology, Bhopal Oct 2016 – July2020
  Mentor: Dr. Jyoti Singhai Team size: 40
  This is a solar imaging satellite project of NIT, Bhopal. Contributed as a member of the On-Board Data handling subsystem in which an operating system using FreeRTOS and task scheduling was created and created codes for interfacing modules with microcontroller in C++.

ACTIVITIES AND AWARDS:

- Subsystem engineering head in Azad 1 Nano satellite project.
- Vice chairperson and treasurer in IEEE MANIT student branch.
- Organized and conducted SCEECS'18 and SCEECS'20 which is an international research paper conference.
- Organised and took workshop on the usage of LATEX.
- Organized and conducted SRAJAN'19 which is a national project contest.
- Conducted AARAMBH and went to three underprivileged schools and taught students interesting topics with the help of small home-made experiments.
- Participated in essay writing activity in cleanliness fortnight organized from 1st to 15th September 2018 in MANIT.