

# Rohan Chacko

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## Education

- 2017–present **B.Tech in Computer Science Engineering**, *International Institute of Information Technology*, Hyderabad, CGPA - 8.65.
- 2016–2017 **Senior Secondary, CBSE**, *Delhi Private School*, Sharjah, U.A.E, 96.8%.
- 2014–2015 **Secondary, CBSE**, *Delhi Private School*, Sharjah, U.A.E, CGPA - 10.

## Work Experience

- Monsoon **Honors Research**, *Centre for Visual Information Technology*, IIIT Hyderabad.  
2019 Working on 3D Human Reconstruction under Prof. P.J Narayanan and Prof. Avinash Sharma
- Monsoon **Teaching Assistant**, *Data and Applications*, IIIT Hyderabad.  
2019 Involves holding lab/tutorial sessions, creating problem sets and grading assignments
- Aug-Nov **Research Assistant**, *Five Fingers Innovative Solutions*, Hyderabad.  
2018 Created a software to detect and track medical equipment in a 2D video using featureless edge based template matching with a set of mesh models. Technologies used: OpenCV, Python, Blender

## Major Projects

- Resume parser **Developed an application to parse resumes and auto-generate questions.**  
Created an application to parse resumes and auto-generate questions based on a resume for applicant filtering and ranking. Technologies used: gensim, scikit-learn.
- Mobile Ad-Hoc network **Developed an application to create a mobile ad-hoc network during natural disasters.**  
Each node in the network sends its location co-ordinates to every other node in the network. This allows for faster detection and rescue of people in dangerous areas.
- AI Bot **Extreme Tic-Tac-Toe Bot.**  
Developed an AI bot that plays a variant of tic-tac-toe using minimax algorithm with alpha-beta pruning and a smart heuristic function to find the optimal move.
- Proxy Server **Multi-threaded HTTP proxy server.**  
Created a web proxy server using socket programming. Implemented LRU caching, user authentication, URL blacklisting.
- Bash Shell **Implemented a linux shell in C similar to bash.**  
Created a shell using system call libraries in C to implement command parsing and execution. Features included: piping, I/O redirection, signal handling.
- WebGL Game **Subway Surfers 3D Game.**  
Created a 3D variant of subway surfers using WebGL. Implemented real world player motion, collision detection, textures, lighting

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## Achievements

- 2019 **19th position globally** for BountyCon 2019. Organized by **Google and Facebook**
- 2019 **16th position nationally** for InCTF organized by Amrita university
- 2018 Won **1st Runner's up** for Microsoft CodeFunDo Hackathon
- 2018 Selected for Dean's List for Academic Excellence. Awarded to top 5% of the batch
- 2014 **One of 90 Global Finalists** for the Google Science Fair.
- 2014 Won the prestigious Sheikh Hamdan Award for overall excellence in curriculars and extra-curiculars. Awarded by the Finance Minister of U.A.E to the top performing students of the country.

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## Relevant Courses Taken

- Vision track Statistical Methods in AI\*, Digital Image Processing\*, Artificial Intelligence, Digital Signal Analysis
  - CS track Data Structures, Algorithms, Computer Networks, Operating Systems, Systems Architecture, Database Systems, Graphics, Automata Theory
  - Mathematics Graph Theory, Linear Algebra, Probability Theory, Discrete Mathematics, Complex track Analysis, Group Theory
- \*=Course in progress

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## Technical Skills

- Programming and Scripting C, C++, Python, Matlab, Javascript, Java, Bash, Go, HTML5
- Frameworks Django, Flask, ReactJS, Materialize, Bootstrap
- Miscellaneous Pytorch, Scikit-learn, Android Studio, Git, OpenGL, WebGL, MySQL, SQLite3, Neo4j, BaseX, Solr
- OS GNU/Linux, Windows