

# Arnav Zutshi

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## EDUCATION

|   |                           |
|---|---------------------------|
| <b>B.Tech in Computer Engineering(CPI-8.86/10)</b><br><i>Veermata Jijabai Technological Institute</i> | 2020-2024<br><i>India</i> |
| <b>Higher Secondary Education(96.2%)</b><br><i>Amity International School</i>                         | 2018-2020<br><i>India</i> |

## WORK EXPERIENCE

|  |                      |
|--|----------------------|
| <b>McGill University</b>   <i>Eye Tracking using DeepLabCut</i>  | Jul 2022-August 2022 |
| <ul style="list-style-type: none"><li>Using Deeplabcut framework for <b>eye-gaze tracking in real time</b></li><li><b>DeepLabCut</b> framework is used for markerless pose estimation based on transfer learning using Res-Net 50</li><li>Training the model on <b>Compute Canada</b> on the MIT GazeCapture dataset</li></ul> |                      |

## PROJECTS

|   |                   |
|---|-------------------|
| <b>Live-CCTV</b>   <i>Python, PyTorch, OpenCV, NumPy</i>  | Sep 2021-Oct 2021 |
| <ul style="list-style-type: none"><li>Detected significant changes in videos by <b>extracting feature vectors</b> of consecutive frames <b>using Res-Net</b></li><li>Used concepts like <b>Cosine Similarity</b> and Euclidean distance on feature vectors to detect the change</li><li>Used <b>YOLOv3</b> model for classification and detection of objects (<a href="#">Project Blog</a>)</li></ul> |                   |
| <b>R-Cell</b>   <i>Python, Flask, HTML, Java Script, Block-Chain</i>  | Oct 2021-Dec 2021 |
| <ul style="list-style-type: none"><li>Developed a <b>Crypto-Currency from scratch</b> using Block-Chain technology, in Python</li><li>Provided every node with a different server and <b>decentralized</b> the block-chain by tabulating the data individually</li><li>Published our <b>Crypto-Currency on a self-developed website</b></li></ul>   |                   |

## COMPETITIONS

|   |                   |
|---|-------------------|
| <b>Vision Beyond Limits</b>   <i>IIT Bombay, Tech-fest</i>  | Oct 2021-Dec 2021 |
| <ul style="list-style-type: none"><li><b>Secured First position</b> with a team of 4; scoring 9.4/10</li><li>Involved designing and coding a <b>multi-class classification</b> approach for disaster assessment of post-earthquake satellite imagery</li><li><b>Developed a U-Net model</b> for classification of buildings based on damage sustained</li></ul> |                   |
| <b>Smart India Hackathon College Level</b>   <i>Hardware</i>  | May 2022          |
| <ul style="list-style-type: none"><li><b>Secured Second position</b> with a team of 6</li><li>The problem statement involved <b>interpolating data points</b> and generating a 3-D map for <b>topography estimation</b></li></ul>   |                   |

## COMMUNITY AND LEADERSHIP

|   |                   |
|---|-------------------|
| <b>Community of Coders, VJTI</b>   <i>Core Member (ML Division)</i>   | Dec 2021-Present  |
| <ul style="list-style-type: none"><li><b>Mentoring</b> multiple teams in the inheritance program on machine learning and taking hands-on workshops on Web Development, Data Structures and Basics of Coding</li></ul> |                   |
| <b>Society Of Robotics and Automation</b>   <i>Core Member</i>  | Jul 2021-Jul 2022 |
| <ul style="list-style-type: none"><li><b>Mentored</b> an audience of <b>200+ students</b> in hands-on workshops on Basics of Coding, Robotics and Computer Vision</li></ul>   |                   |
| <b>Pratibimb, VJTI</b>   <i>Department Coordinator</i>  | Sep 2021-Aug 2022 |
| <ul style="list-style-type: none"><li>Managed cultural fests and inter-college events which saw a <b>footfall of 80K+ people</b></li></ul>  |                   |

## TECHNICAL SKILLS

|                        |   |
|------------------------|---|
| <b>Languages</b>       | C++, Python, Java   |
| <b>Libraries</b>       | OpenCV, Tensorflow, NumPy, Matplotlib                       |
| <b>Frameworks</b>      | SQL, Flask, LaTeX, HTML, CSS                                |
| <b>Developer Tools</b> | Git, Linux, Anaconda, Solidworks, VS Code, Spyder, IntelliJ |