

# VINIT TODAI

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## Education

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**Northwestern University, USA** | *Master of Science in Artificial Intelligence* **Sep 2021 – Dec 2022(Exp.)**

*Courses: Frameworks of AI, Introduction to AI, Machine Learning, Data Science*

**University of Mumbai, India** | *Bachelor of Technology in Computer Engineering* **Aug 2015 – Jun 2019**

*Courses: Data Structures, Algorithms, AI, Machine Learning, Neural Networks, IOT* **CGPA: 8.48/10**

## Experience

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**Barclays Global Service Centre, Pune, India** **Jul 2019 – Aug 2021**

*Software Engineer, Barclaycard UK*

- Developed REST APIs for iPortal, which provides a single point of access to all Barclays Corporate Banking services, impacting over 200,000+ users globally (Java, Spring, Hibernate, MySQL)
- Played a vital part in the end-to-end delivery of 5 APIs following an agile project development methodology, right from requirement analysis, development, unit and integration testing, deployment and final release
- Directed a team of 8 engineers for the development of 'Assist', a platform that connects task publishers—who have an innovative idea, and task contributors—who want to acquire new skills, saving 762+ man-hours annually, with 230+ users across Barclays (Java, Spring, Hibernate, MySQL, Angular)
- Spearheaded the InnerSource initiative to reuse software modules in projects across the department by unifying with 'Assist', where colleagues can contribute by hosting a workshop or publishing a blog on how to reuse their project code

## Projects

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**Brain Controlled Wheelchair** [[Demo](#)] | **University of Mumbai, India**

- Led a team of 3 researchers to develop a brain-controlled wheelchair with 98% accuracy by reading brainwaves with an EEG headset and streaming data to an Android app that interprets brainwaves and translates them into commands
- Integrated the system with a Raspberry Pi based wheelchair, and implemented obstacle detection and avoidance using Tensorflow Mobile; lowering the potential cost from \$2000 to \$400

**Sign Language Translator** [[Demo](#)] | **Northwestern University**

- Developed an American Sign Language translator with an accuracy of 96% using several ML algorithms such as Neural Network, Random Forest, KNN, SVM, Logistic Regression, and Naive Bayes on the Leap Motion Controller ASL dataset

**AirMusic—Generate Music with your moves** [[Demo](#)] | **Tensorflow World Hackathon**

- Developed a real-time music production system that uses a camera to evaluate 17 human pose keypoints, estimates human postures with Posenet, a Tensorflow Deep Learning model, and maps them to melodies from piano and drums

**GestureAssistant** [[Demo](#)] | **Global PyTorch Hackathon**

- Developed a virtual assistant in Python that uses Pytorch to turn 5 gestures into desktop commands in real time, such as opening a browser, Microsoft Word, or launching a video player, automating the desktop without the need to click a key

**BrainPort - A VR Journey with your Brain** [[Demo](#)] | **Facebook DevC Challenge**

- Designed a VR environment in React 360 and integrated it with a brainwave headset, analyzing 5 brainwave bands in real time and teleporting the user to 4 different locations in the virtual world with his thoughts, such as a beach or mountain

## Technical Skills

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**Programming:** Java, Python, C++, R, SQL, HTML, CSS, Javascript, Angular, Node.js, MATLAB, Android programming

**Machine Learning:** Scikit-learn, NumPy, Pandas, Matplotlib, TensorFlow Mobile, PyTorch

**Frameworks/Tools:** Microservices, Git, Gradle, Spring Boot, Hibernate, Jenkins, Openshift, Firebase, JIRA, Confluence

## Leadership / Extracurricular

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**Maker Relations Officer** | **Maker Mela Core Team, RiiDL** **Aug 2016 – Jan 2018**

- Interacted with 1000+ innovators, startups, and technology leaders from across the globe and collaborated with 20+ makerspaces, providing them a platform to showcase their inventions at Asia's largest Innovator Gathering—Maker Mela
- Supervised a team of 5 and collaborated with multiple other teams to organize Maker Mela for two consecutive years, with 200+ innovators and 50,000+ visitors from across the world

## Honors and Awards

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- Keynote Speaker, Hackathon Winner [[Link](#)]  
—MongoDB World '19, New York (900+ participants from 22 countries)
- 5th Place, AWS DeepRacer League—A self-driving car race driven by ML, conducted at Barclays (200+ participants)
- Finalist, India Innovation Challenge Design Contest, a Tech-Startup competition arranged by the Govt. of India, Texas Instruments and IIM Bangalore, for the project Brain Controlled Wheelchair (Top 30 from 26,511 participants)
- Featured on front page of Maharashtra Times, India's largest selling newspaper, for project Brain Controlled Wheelchair