

# CURRICULUM VITAE

## VINAYAK MAJHI

JRF in IMPRINT -2 a technology development initiative of MHRD and DST  
Department of Biomedical Engineering  
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### Area of Interest

Computational Biology, Neurodynamics, Neurophysiology, Soft Computing, Software Development, Automation, Bioelectronics.

### Educational Qualification

Degree	Year of Passing	Subject	University	Grade / Marks
PhD Course Work	2018	Biomedical Engineering	North-Eastern Hill University	5.47 (6)
M.Tech	2013	Computer Science & Engineering	University of Calcutta	67.5 (100)
B.Tech	2011	Computer Science & Engineering	West Bengal University Technology	7.27 (10)

Examination	Year of Passing	Board	Institution Name	Percentage of Marks
Higher Secondary	2007	W.B.C.H.S.E	Jaynagar Institution	74.6 (100)
Secondary	2005	W.B.S.E	Jaynagar Institution	75 (100)

### Training and Project

- Completed one month vocational training in **Oracle PL/SQL** at **Ardent Collaboration, Saltlake, Kolkata** during June-July 2009.
- Completed one month vocational training in **JZEE** and project on "**On line Human Resource Management**" named "**E-HR Manager**" at **Ardent Collaboration, Saltlake, Kolkata** during June-July 2010.

## Subject of Interest

- **Subject:** Database Management System, Analog & Digital Electronics, Data Structure, Biomedical Instrumentation, Bioelectronics, Software Engineering
- **Technical Skill:**

Language	C, C#, JAVA, WPF, HTML, CSS, Java Script
Framework	.NET, J2EE, Bootstrap
Database	Oracle, MySQL, MSSQL, MS Access
Development Tools	Visual Studio, Adobe Dreamweaver
Web Server	IIS , Apache Tomcat
Reporting	Crystal Report
Micro Controller Programming	Arduino, RaspberryPi
Others	Avid Liquid, Adobe Photoshop, Adobe Premier Pro, Adobe After Effect, MS Office, Sony Sound Froge.

## Patents

1. **Granted:** 4th November 2020, "Interactive Gaming Device for Cerebral Palsy Intervention, Treatment and Management And Its Method Thereof" (Patent number: 2020102546, Australia Innovation Patent)
2. **Granted:** 6th January 2021, "A Method and an Automatic Device for Disinfecting Books Using Heat and Ultraviolet Rays" (Patent number: 2020103336, Australia Innovation Patent)
3. **Granted:** 8th April 2021, "Tremor Identification Device for Parkinson's Disease" (Patent No: 364299, Indian Patent)
4. **Published:** 15th May 2020, "Automated Vehicle Accident and Theft Prevention Device" (Application No: 201931019856, Indian Patent)
5. **Published:** 22nd May 2020, "Cost Effective and Non-Contact Digital Thermometer" (Application No: 202031015705, Indian Patent)
6. **Published:** 19th October 2020, "A METHOD AND AN AUTOMATIC DEVICE FOR DISINFECTING BOOKS USING HEAT AND ULTRAVIOLET RAYS" (Application No: 202031045548, Indian Patent)
7. **Applied:** 4th March 2020, "Automatic interactive device for identification, measurement and correction of speech sound disorder" (Application No: 202031009337, Indian Patent)

## Projects

- "Auto controlled Library Book Sanitizing Machine for COVID-19 Situation" (Ongoing)
- "Cost Effective and Non-Contact Digital Thermometer for COVID-19" (Completed)
- "Designing of Mobile Medical Unit (MMU) Device" (Completed)
- "Automated Vehicle Accident Prevention System" (Completed)
- "Development of an Mobile Application for SOT Information Communication" (Completed, Supervised)
- Design and Development of Speech Interactive Library. (M.Tech).

- **Comparison of Available Technique for Removing Skew in Network Multimedia Communication.** (B.Tech)

## Membership

- Student member of IEEE, (Membership No. 94223969)
- Student member of The **International Society for Neurochemistry**, India (ID No. 23936)
- Student member of **Asia Pacific Society for Neurochemistry**. (ID No. 17-3-IND-S30)
- Student Member of **AICTE Institutional Innovation Council**, North-Eastern Hill University
- Student Member of **Design and Innovation Centre**, North-Eastern Hill University.

## Employment Teaching and Research

- Research fellow in the Department of Biomedical Engineering, North- Eastern Hill University, Shillong, Meghalaya (August, 2017 to Present)
- Guest Faculty of B. Tech Biomedical Engineering Department in North Eastern Hill University (Aug, 2018 to Nov, 2018)
- Centre In-charge and COPA Instructor of Mandirbazar Govt. ITI, PPP with Orion Edutech Pvt. Ltd. (July 2016 to December 2016)
- Founder of **Blugrape Software Services**, South 24 Parganas (MSME Registered Software Development Organization)
- Software Developer in the association with Anglo Swiss Watch Co. (August 2013 to March 2017)

## Industrial Working Experience

- Attendance Monitoring Software of **Hindustan Aeronautics Limited Barrackpore** for Anglo-Swiss Watch Co.
- 100 Users Capacity Biometric Door Lock System of **National Jute Manufactures Corporation Ltd.** for Anglo-Swiss Watch Co.
- MIS Software for Multi User Attendance Report of **SAIL Meghahatuburu** for Anglo-Swiss Watch Co.
- Attendance Data Download Upgradation and Device Management Software (for Unlimited Employee Count) of **Heritage Institute of Technology** for Anglo-Swiss Watch Co.
- Attendance Management Software for **Palsons Derma Pvt. Ltd** for Anglo-Swiss Watch Co.
- Automatic Mail Alert for Addition, Alteration, Deletion in Attendance Database of **Texmaco Rail and Engineering Limited for Anglo-Swiss Watch Co.**

## Award and Achievements

Name of awards	Title	Award Authority	Year
IBRO Best Logo Contest Award	10 <sup>TH</sup> IBRO WORLD CONGRESS, Korea	IBRO	2018

### Conference Paper

- **Vinayak Majhi**, Sudip Paul, Goutam Saha, Jitendra Kumar Verma “Sensor based detection of parkinson’s disease motor symptoms” IEEE The International Conference on Computational Performance Evaluation (ComPE-2020)
- Angana Saikia, **Vinayak Majhi**, Masaraf Hussain, Amit Ranjan Barua, Sudip Paul “Machine learning based diagnostic system for early detection of Parkinson’s disease” IEEE The International Conference on Computational Performance Evaluation (ComPE-2020)
- **Vinayak Majhi**, Sudip Paul, Rachna Jain, “Bioinformatics in Healthcare System”, IEEE Amity International Conference on Artificial Intelligence (AICAI’2019), Amity University Dubai (Accepted)
- Vinay Kumar Pandey, **Vinayak Majhi**, Sudip Paul, “Design of Optimized NAND and NOR circuits for reduction in Power Dissipation in Renewable Energy Harvesting Hardware”, International Conference on Advanced Materials for Energy Science and Technology, Shillong 2019
- Vinay Kumar Pandey, Divakar Tamang, **Vinayak Majhi**, Sudip Paul, “Sub-threshold: A Design Technique for Ultra-Low Power Operation”, NCETACS, St. Anthony’s College, Shillong, 2018.
- Vinay Kumar Pandey, Angana Saikia, **Vinayak Majhi**, Sudip Paul. “Clinical Intervention of Cerebral Palsy”, 5<sup>th</sup> Cognition workshop, IISc, Bengluru, 2018.
- Vinay Kumar Pandey, Angana Saikia, **Vinayak Majhi**, Sudip Paul. “Procedure and Protocol to Predict Developmental Dysarthria in Early Stage”, IBRO School, AIIMS New Delhi, 2018.

### Journal Publication

- **Vinayak Majhi**, Sudip Paul, Goutam Saha. “Symptomatic Review of Parkinson’s Disease”. Biomedical and Pharmacology Journal (BPJ). (2020)
- **Vinayak Majhi**, Angana Saikia, Amitava Datta, Aseem Sinha, Sudip Paul. “Comprehensive Review on Deep Learning for Neuronal Disorders: Applications of Deep Learning”, International Journal of Natural Computing Research. (2020).
- Angana Saikia, **Vinayak Majhi**, Masaraf Hussain, Sudip Paul “A Systematic review on Application based Parkinson’s disease Detection Systems” International Journal on Emerging Technologies (2019)
- Vinay Kumar Pandey, Divakar Tamang, **Vinayak Majhi**, Sudip Paul. “Sub-threshold: A Design Technique for Ultra-Low Power Operation”, Journal of Advance Database Management and System, Vol. 6 (1). (Under Review 2018)

### Book Chapter

- **Vinayak Majhi**, Sudip Paul. Artificial Intelligence in Bioinformatics “Advances in Computational Intelligence Techniques” pp 177-190, (2020)
- **Vinayak Majhi**, Sudip Paul. Application of Content-Based Image Retrieval in Medical Image Acquisition. “Challenges and Applications for Implementing Machine Learning in Computer Vision”, IGI Global, (2019).
- Angana Saikia, **Vinayak Majhi**, Masaraf Hussain, Sudip Paul. Tremor identification using machine learning in Parkinson’s disease, “Early Detection of Neurological Disorders Using Machine Learning systems”, (2019).
- **Vinayak Majhi**, Bishnu Choudhury, Sudip Paul. Prevention and treatment of Alzheimer’s disease in the light of Ayurveda. "Alternative medicine for Alzheimer disorder", Taylor & Francis (CRC Press), USA. (Accepted, 2018).

### Magazine Publication

- Vinay Kumar Pandey, **Vinayak Majhi**, Sudip Paul, “Yoga: A new paradigm for human well-being and regenerative medicine” Eastern Panorama, 2018.

### Workshop Attended

- Five days AICTE Training And Learning (ATAL) Academy Workshop on **Robotics for Healthcare** Organized by Department of Biomedical Engineering, NEHU.
- Five days AICTE Training And Learning (ATAL) Academy Workshop on **Artificial Intelligence** Organized by Department of Electronics and Communication Engineering, NEHU.
- Five days AICTE Training And Learning (ATAL) Academy Workshop on **3D Printing** Organized by Department of Biomedical Engineering, NEHU
- Two days workshop on **Virtual Laboratory** Organized by Department of Biomedical Engineering, NEHU in collaboration with Indian Institute of Technology, Roorkee.
- One day Workshop on **Present Trends in Healthcare Technology** Organized by Department of Biomedical Engineering, NEHU in collaboration with National Institute of Electronics and Information Technology (NIELIT) Shillong.
- One day Workshop on **The use of Foldscope: Towards democratising science by providing ‘microscope for everyone’** Organized by Department of Biomedical Engineering, NEHU.

### Extra Curricular Activities

- Microcontroller Based Automatic Control Circuit Designing.
- Working as Video Editor Sound Designer in some Documentaries.

### Language Proficiency

- Bengali(read, write, speak), Hindi(read, speak), English(read, write, speak)

## Personal Details

**Name** : Vinayak Majhi  
**Father's Name** : Balaram Majhi  
**Date of Birth** : 08-September-1989  
**Sex** : Male  
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## Referees

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### **Dr. Bishnu Choudhury**

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### **Prof. Goutam Saha**

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I hereby declare that the information furnished above is true to the best of my knowledge.