#### **About BIET**

Founded in 1979 by the Bapuji Educational Association, Bapuji Institute of Engineering and Technology (BIET) has established itself as a prominent institution for higher education in engineering and technology. Recognized by AICTE and accredited with an 'A' grade by NAAC, as well as by the Institution of Engineers, BIET has grown significantly over the years. BIET has received accreditation from National Board of Accreditation (NBA)for several of its undergraduate engineering programs. The institute currently offers 13 undergraduate and 5 postgraduate programs across various disciplines in engineering, technology, and management, and has 14 VTU-recognized research centers. Alongside its academic focus, BIET actively engages in consultancy projects in civil, environmental, mechanical, electrical, electronics, and other engineering fields.

#### **About the Department**

The department of Electronics & Communication Engineering was established in the year 1979 with a vision to promote and maintain academic & professional excellence in technical education and research field. The department has started PG course on IoT & Sensor Systems from 2022. Department is recognized as Research Centre by VTU Belagavi since 2020. The department is accredited by National Board of Accreditation (NBA), AICTE, New Delhi up to 2027. Department has to its credit 37 ranks. The department has well qualified faculty members and dedicated supporting staff. The department has excellent infrastructure, well equipped laboratories and departmental library. The Laboratories are equipped with Cadence, Xilinx Software with CPLD/FPGA kits, MATLAB(ML)R 2024a update 5, DSP Trainers and Evaluation Modules with Code Composer Studio, ARM Cortex M3 Boards, Microcontroller Trainers with Flash Modules, ARM 72148 Evaluation Board, LabVIEW, OFC kits, Microwave Testbench, Microstrip Trainer Setup, Mixer Circuit module, PLL Module, Analog and Digital Communication modules.

#### **Chief Patrons**

Dr. Shamnur Shivashankarappa

Member of Legislative Assembly, Government of Karnataka, Honorable Secretary, BEA

Sri. S. S. Mallikarjun

Minister of Mines & Geology and Horticulture, Government of Karnataka. Honorable Joint Secretary, BEA

Dr. Prabha Mallikarjun Member of Parliament, Government of India, Governing Body Member, BEA
Patrons
Dr. B. E. Rangaswamy, Registrar, VTU,Belagavi Prof. Y. Vrushabhendrappa, Director, BIET
Dr. H. B. Aravind, Principal, BIET
Advisory Committee
Dr. G. S. Sunitha, Professor & Head
Prof. Ashalatha M E. PG Coordinator

#### **Resource Persons**

Mr. Vishal, Vice President, iNube Software Solutions, Bangalore

Mr. Lavi Nigam, ML Engineer, Applied AI Engineering group, Google

**Dr. Ravi Shankar,** Senior Consultant, iNube Software Solutions , Bengaluru

Mr. Ramana Reddy Senior Consultant, iNube Software Solutions, Bengaluru

Mrs. Lakshmi Shastry, Enterprise Architect, Brillio Technology, Bangalore

**Dr. Nataraj K S**, Assistant Professor, IIIT Dharwad

Dr. Krishnendu Ghosh, Assistant Professor, IIIT Dharwad

Mr. Shreekanthappa Gaddad, Principal Delivery Project Manager, Microsoft, Dallas

#### Mr. Venkatesh, Senior Technical Program Manager, Amazon, Austin







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Department of Electronics & Communication Engineering (Accredited by NBA)

ATAL Online 6 Day Faculty Development Programme On Generative AI – Democratization of AI, Responsible AI

# 17<sup>th</sup> to 22<sup>nd</sup> February 2025



**Convener** Dr. G. S. Sunitha, Professor & Head

#### **Institute Vision**

To be a center of excellence recognized nationally and internationally, in distinctive areas of engineering education and research, based on a culture of innovation and invention.

#### **Institute Mission**

BIET contributes to the growth and development of its students by imparting a broad based engineering education and empowering them to be successful in their chosen field by inculcating in them positive approach, leadership qualities and ethical values.

#### **Department Vision**

To be in the forefront in providing quality technical education and research in Electronics & Communication Engineering to produce skilled professionals to cater to the challenges of the society.

#### **Department Mission**

- To facilitate the students with profound technical knowledge through effective teaching learning process for a successful career.
- To impart quality education to strengthen students to meet the industry standards and face confidently the challenges in the programme.
- To develop the essence of innovation and research among students and faculty by providing infrastructure and a conducive environment.
- To inculcate the student community with ethical values, communication skills, leadership qualities, entrepreneurial skills and lifelong learning to meet the societal needs.

#### **Contents of FDP**

- Introduction to Generative AI
- Gemini Architecture
- Training Generative Models
- Applications of Generative AI
- Ethical Considerations
- Comparison with Other Models
- Use Cases in Healthcare
- Creative Content Generation
- Natural Language Processing
- Future of Generative AI
- User Interaction with Generative AI
- Prompt Engineering

#### **Objectives**

- Understand the fundamental principles and applications of generative AI.
- Explore the architecture and training techniques of generative models, such as the Gemini Architecture.
- Analyze real-world applications and ethical considerations of generative AI in industries like healthcare and creative content generation.
- Learn the essentials of prompt engineering and user interaction with generative AI systems.

#### **Expected outcomes**

- Gain a comprehensive understanding of generative AI models and their diverse applications across multiple industries.
- Apply training techniques and prompt engineering to effectively interact with and optimize AI models.
- Evaluate ethical challenges and propose solutions for responsible AI usage.
- Explore and predict future trends in generative AI and its potential impact on technology and society.

## Who can participate?

The faculty members of the AICTE approved Institutions, Research Scholars, PG students and Industry Professionals.

#### Registration

Participants can sign up and register for free to the FDP in AICTE ATAL website link: https://www.aicte-india.org/atal

### No Registration Fee

#### **Important Dates**

Last date to Register: 12th February 2025.Intimation of Selection: 14th February 2025.Confirmation from Participants: 15th February 2025.

#### Certification

Certificates will be issued by AICTE Training and Learning (ATAL) academy only to those participants who comply the mandatory session attendance and assessment score.

#### Coordinator

Dr. Nirmala S O, Professor Email: <u>sonirmala2023@gmail.com</u> Mob: 9481360590

#### **Co-Coordinator**

**Dr. Leela G H,** Professor Email: <u>leelagh2023@gmail.com</u> Mob: 9844474712

#### **Organizing Members**

Faculty Members & Technical Staff. Dept. of E&CE.

# ATAL Online 6 Day Faculty Development Programmes 2024-25 Schedule FDP Thrust Area: Advanced Computing

**FDP Title:** Generative AI – Democratization of AI, Responsible AI

# Start Date: 17-02-2024

Start Date: 17-02-2024			End Date: 22-02-2025		
17/02/2025	18/02/2025	19/02/2025	20/02/2025	21/02/2025	22/02/2025
6:00PM to 6:30PM	6:00PM to 7:30PM	6:00PM to 7:30PM	6:00PM to 7:30PM	6:00PM to 7:30PM	2:00PM to 3:30PM
Inaugural Session	Session 3	Session 5	Session 7	Session 9	Session 11
	Topic: <b>Training Generative</b> <b>Models</b> Name of the Expert: <b>Dr. Nataraj K S</b> Designation & Organization: <b>Assistant Professor,</b> <b>HIT Dharwad</b> Years of Exp: <b>14.8</b>	Topic: Ethical Considerations Name of the Expert: Mr. Shreekanthappa Gaddad Designation & Organization: Principal Delivery Project Manager, MSFT, Dallas Years of Exp:30	Topic: Use Cases in Healthcare Name of the Expert: Mr. Venkatesh Designation & Organization: Senior Technical Program Manager, Amazon, Austin Years of Exp: 30	Topic: Natural Language Processing Name of the Expert: Dr. Krishnendu Ghosh Designation & Organization: Assistant Professor, IIIT Dharwad Years of Exp:12	Topic: Technical Challenges Name of the Expert: Mr. Ramana Reddy Designation & Organization: Senior Consultant, iNube Software Solutions , Bengaluru Years of Exp: 17
6:30PM to 8:00PM	7:30PM to 9:00PM	7:30PM to 9:00PM	7:30PM to 9:00PM	7:30PM to 9:00PM	3:30PM to 5:00PM
Session 1	Session 4	Session 6	Session 8	Session 10	Session 12
Topic: Introduction to Generative AI Name of the Expert: Mr. Vishal Designation & Organization: Vice President, iNube Software Solutions, Bengaluru Years of Exp: 18	Topic: Applications of Generative AI Name of the Expert: Dr. Ravi Shankar Designation & Organization: Senior Consultant, iNube Software Solutions, Bengaluru Years of Exp: 20	Topic: Comparison with Other Models Name of the Expert: Mr. Lavi Nigam Designation & Organization: ML Engineer, Applied AI Engineering group, Google Years of Exp: 12	Topic: <b>Creative Content</b> <b>Generation</b> Name of the Expert: <b>Lakshmi</b> <b>Shastry</b> Designation & Organization: <b>Enterprise Architect, Brillio</b> <b>Technology, Bengaluru</b> Years of Exp: <b>25</b>	Topic: Future of Generative AI Name of the Expert: Dr. Ravi Shankar Designation & Organization: : Senior Consultant, iNube Software Solutions , Bengaluru Years of Exp: 20	Topic: User Interaction with Generative AI Name of the Expert: Mr. Vishal Designation & Organization: Vice President, iNube Software Solutions, Bengaluru Years of Exp:18
8:00PM to 9:30PM Session 2 Topic: Gemini Architecture Name of the Expert: Mr. Lavi Nigam Designation & Organization: ML Engineer , Applied AI Engineering group , Google Years of Exp: 12	,				5:00PM to 6:30PM Session 13 Topic: Prompt Engineering Name of the Expert: Dr. Nataraj K S Designation & Organization: Assistant Professor, IIIT Dharwad Years of Exp: 14.8 6:30PM to 7:30PM
					Online test & feedback 7:30PM to 8:00PM Valedictory Session

Participants can sign up and register for free to the FDP in AICTE ATAL website links: https://www.aicte-india.org/atal ٠

There is no charge for Registration, Courses and Certificate •