

The Enugu Tech Talent Program (ETT)

Curriculum Overview

The Enugu SME 3MTT Program equips 5,000 fellows over 4 months with critical digital skills. The curriculum is divided into six key courses. Each course focuses on essential industry topics and culminates in a practical project or capstone challenge.

1. Software Development

Objective:

Build a solid foundation in programming and software creation to enable fellows to design, develop, and test real-world applications.

Key Topics:

- **Introduction to Software Development:** Overview of software, applications, and the software development lifecycle.
 - **Programming Fundamentals:** Variables, data types, control structures, and basic debugging.
 - **Web Development Basics:** HTML, CSS, JavaScript essentials (with an introduction to Node.js for server-side understanding).
 - **Software Testing & Quality Assurance:** Understanding the importance of testing, basic techniques, and methodologies.
 - **Capstone Project:** Develop a simple software application integrating learned concepts.
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2. UI/UX Design

Objective:

Empower fellows to create engaging and user-friendly digital experiences through effective design principles and practical applications.

Key Topics:

- **Introduction to Design:** History, significance, and core design principles.
- **Human-Centered Design & Design Thinking:** Empathy mapping, user personas, and inclusive design practices.

- **User Research & UX Fundamentals:** Techniques for gathering user insights, wireframing, and information architecture.
 - **UI Design Principles:** Visual hierarchy, typography, color theory, and accessibility in design.
 - **Portfolio Development & Final Project:** Showcase design projects and case studies to build a professional portfolio.
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3. Product Management

Objective:

Develop strategic and operational skills required to manage digital products through their lifecycle, from ideation to launch.

Key Topics:

- **Role of a Product Manager:** Understanding responsibilities and career pathways.
 - **Product Development Lifecycle:** Stages of product development, from ideation to market launch.
 - **Business Requirement Document (BRD):** Techniques for creating effective project documentation.
 - **Go-to-Market Strategy:** Planning product launches, stakeholder management, and competitive analysis.
 - **Product Portfolio & Professional Profile:** Building a portfolio that reflects your skills and experiences.
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4. Data Science

Objective:

Provide fellows with the analytical skills and programming proficiency to extract insights from data and solve real-world problems.

Key Topics:

- **Introduction to Data Science:** Fundamentals, importance, and the data-driven decision-making process.
- **Python Programming for Data Science:** Basic Python concepts, data manipulation, and handling data structures.
- **Exploratory Data Analysis (EDA):** Techniques for analyzing and visualizing data distributions and relationships.

- **Advanced Data Analysis:** Applying statistical methods, hypothesis testing, and regression analysis.
 - **Capstone Project:** Develop a data-driven project that synthesizes the course content.
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5. Data Analysis & Visualization

Objective:

Enable fellows to transform raw data into actionable insights using analytical and visualization techniques.

Key Topics:

- **Fundamentals of Data Analysis:** Overview of tools and techniques for data analysis.
 - **Data Wrangling & Cleaning:** Techniques for preparing data for analysis, including handling missing values and outliers.
 - **Exploratory Data Analysis (EDA):** Visualization techniques to uncover patterns and trends.
 - **Statistical Analysis:** Introduction to hypothesis testing, regression analysis, and variance analysis.
 - **Visualization Principles:** Best practices in designing clear and engaging visualizations using tools like Power BI, Tableau, or Python libraries.
 - **Capstone Project:** Create a comprehensive report with visualized data insights.
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6. AI / Machine Learning

Objective:

Introduce fellows to the fundamentals of AI and machine learning, equipping them with the skills to build and evaluate predictive models.

Key Topics:

- **Introduction to AI & Machine Learning:** History, definitions, and key concepts.
- **Fundamental Algorithms:** Supervised, unsupervised, and reinforcement learning techniques.
- **Python for ML:** Practical Python programming for machine learning, including key libraries (scikit-learn, TensorFlow).
- **Data Pre-processing & Model Building:** Techniques for cleaning data and developing predictive models.
- **Advanced AI Topics:** Evaluation metrics, natural language processing, and emerging trends.

- **Capstone Project:** Develop an AI/ML project that applies the concepts learned to a real-world problem.
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