FULLSTACK WEB DEV

GETTING STARTED

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WHAT'S WEB DEVELOPMENT?

GETTING STARTED

OVERVIEW OF WEB DEVELOPMENT

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Basic Explanation

- Web development is akin to constructing a house online.
- A house requires architects, builders, and designers.
- Websites are built using specific codes and tools.

Deep Dive

- **Frontend**: User-facing aspects on browsers.
- U**ses tools**: HTML, CSS, JavaScript, React.js.
- **Backend**: Hidden powerhouse for websites.
- Manages calculations, data, frontend functionality.
- **Uses Node.js** (JavaScript) and MongoDB.
- Both frontend and backend create functional sites/apps.

Analogue

- Frontend: Restaurant's visible parts like design and menus.
- Dictates ambiance and dining feel.
- **Backend**: The behind-the-scenes kitchen.
- Chefs (**servers**) prepare dishes (web content).
- Storage of ingredients parallels data storage.

Summary

- Web development: Art of creating websites.
- Two components: frontend and backend.
- **Frontend**: What users see and interact with.
- **Backend**: Powers and supports frontend.
- Frontend is the dining area of a restaurant.
- Backend is the kitchen, making everything happen.

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WHAT'S FULL-STACK DEVELOPMENT?

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OVERVIEW

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FRONTEND

- **Languages**: HTML, CSS, JavaScript
- **Frameworks/Libraries**: React, Angular, Vue.js, jQuery
- **Tasks**: UI creation, styling, responsive design, user experience improvement, API communication.

BACKEND

- **Languages**: Node.js, Java, Python, Ruby, PHP, C#
- **Frameworks**: Express.js (Node.js), Spring (Java), Django (Python), Ruby on Rails (Ruby), .NET Core (C#)
- **Tasks**: Server setup, API creation, database operations, data integrity, authentication, authorization.

FULLSTACK-
DEVELOPER

OVERVIEW

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Brief Overview

- Full-stack development: Combines front end and back end development.
- Full-stack developer: Skilled in both areas.
- Covers appearance, user experience, and functionality.
- Also works on server and database aspects.

Deep Dive

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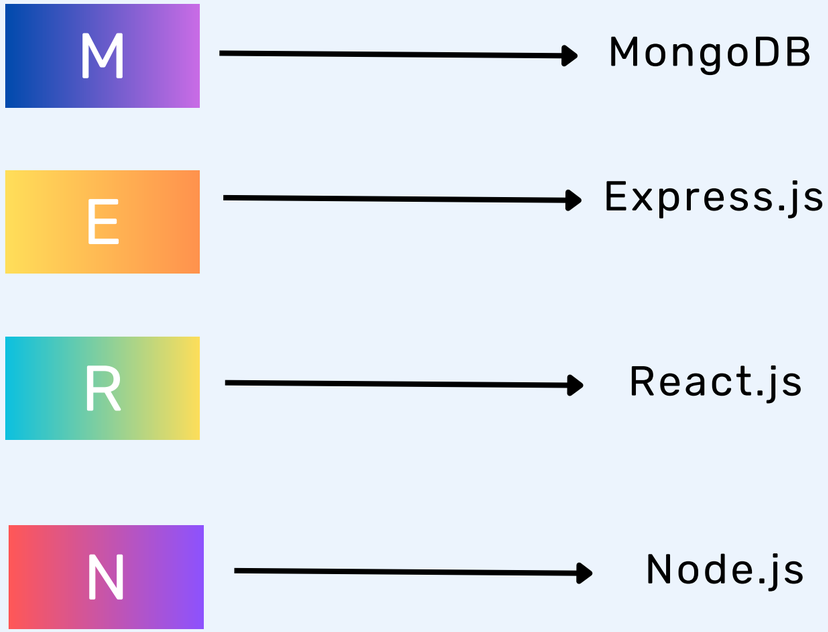
WHAT'S MERN-STACK DEVELOPMENT?

GETTING STARTED

OVERVIEW



OVERVIEW

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MONGODB

-Type: NoSQL Database

-**Description****: MongoDB stores data in JSON-like format, is scalable, and provides an intuitive alternative to relational databases.

EXPRESSJS

- **Type**: Web App Framework

- **Description**: Express.js is a minimal Node.js framework for web apps, simplifying routing, API creation, and database integration.

REACT JS

- **Type**: Frontend Library

- **Description**: React.js (React) is a popular JavaScript library for building user interfaces, emphasizing reusability and efficient UI updates through a virtual DOM.

NODE JS

- **Type**: JavaScript Runtime

- **Description**: Node.js runs JavaScript on servers, excels in scalability with its asynchronous, event-driven nature. Express.js is built on Node.js.

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WHY MERN-STACK DEVELOPMENT?

GETTING STARTED

WHY MERN STACK

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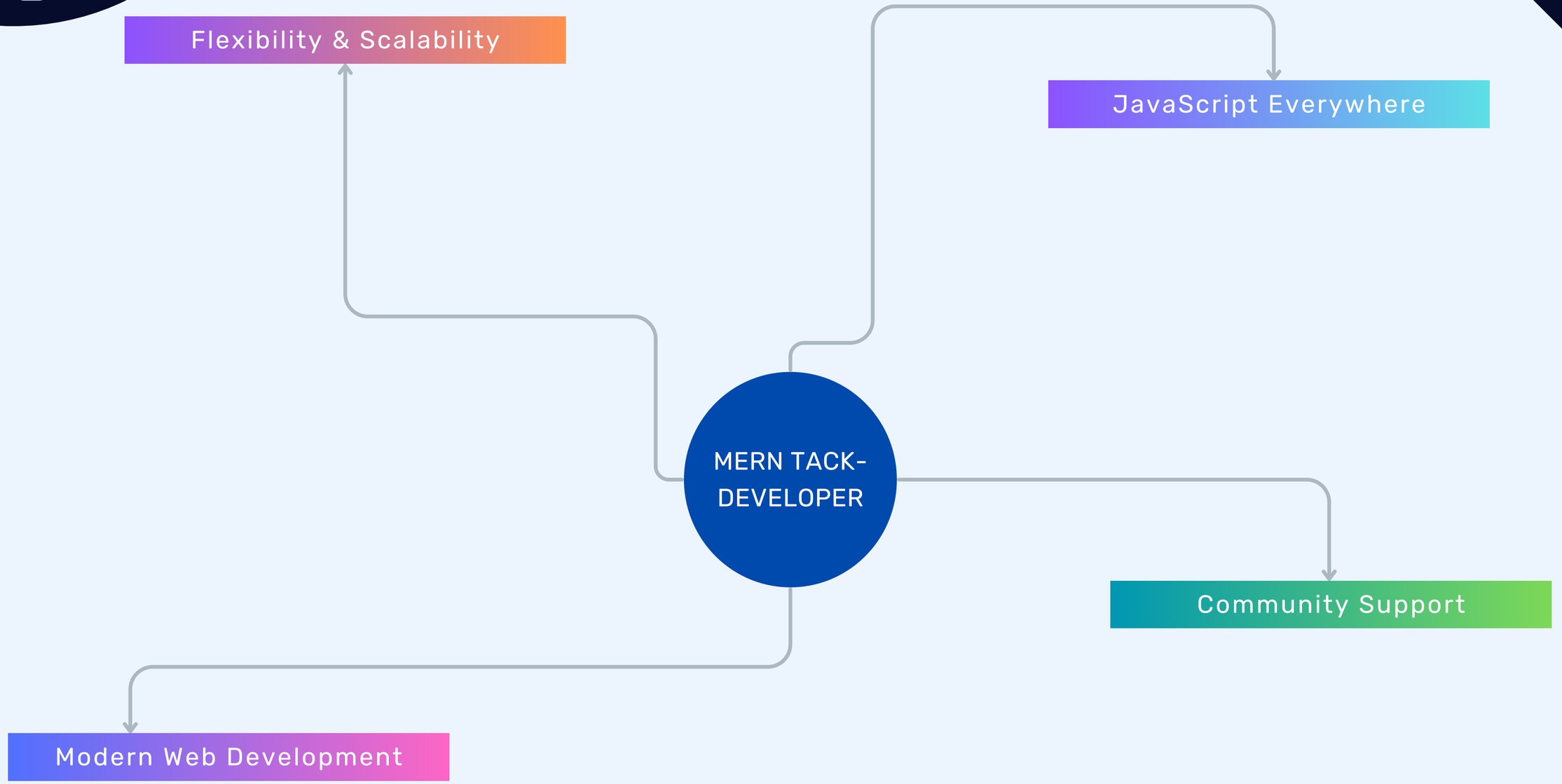

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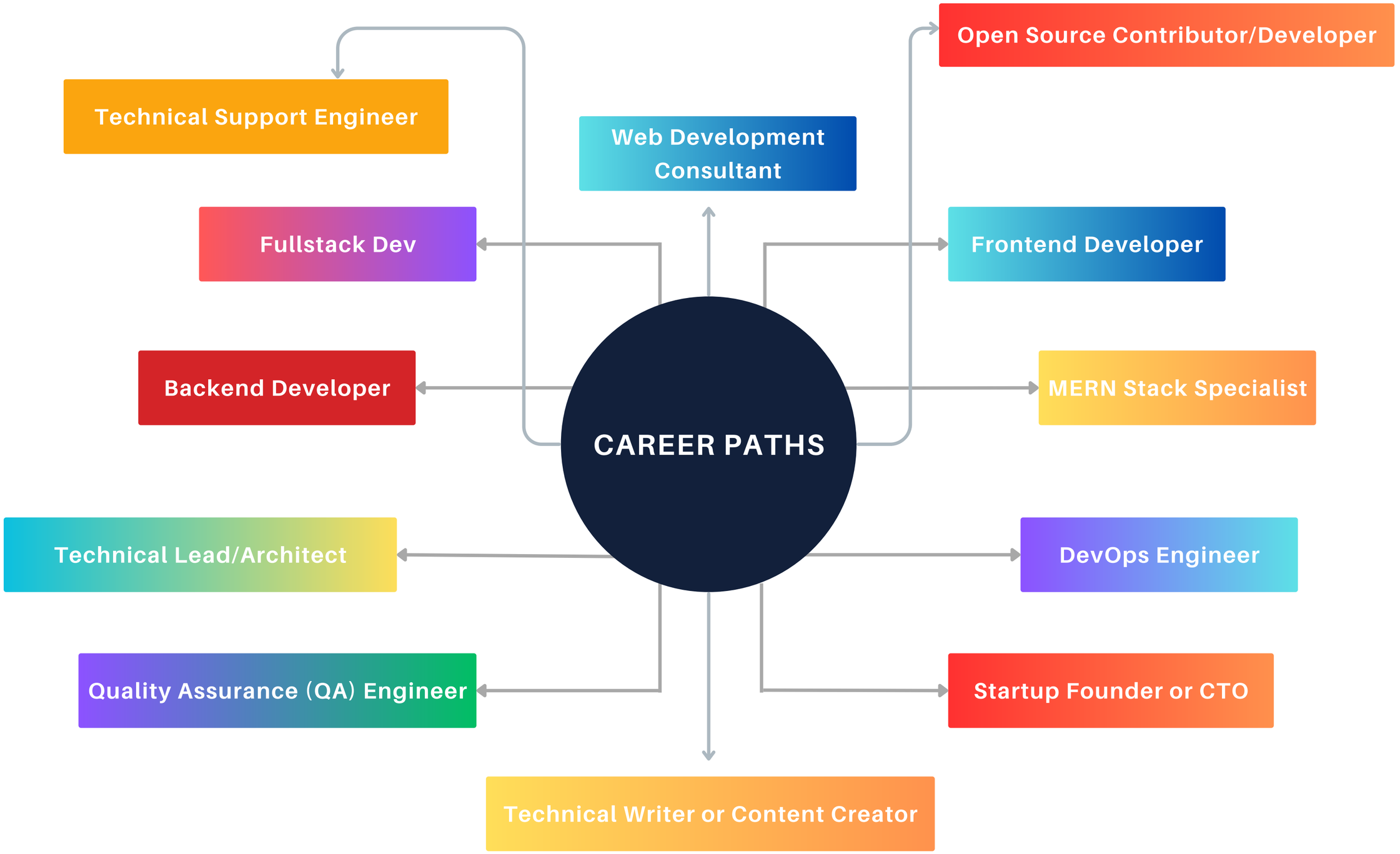
CAREER PATHS

FULL-STACK DEV

GETTING STARTED


Technical Support Engineer
Open Source Contributor/Developer
Web Development Consultant
Fullstack Dev
Frontend Developer
Backend Developer
CAREER PATHS
MERN Stack Specialist
Technical Lead/Architect
DevOps Engineer
Quality Assurance (QA) Engineer
Startup Founder or CTO
Technical Writer or Content Creator

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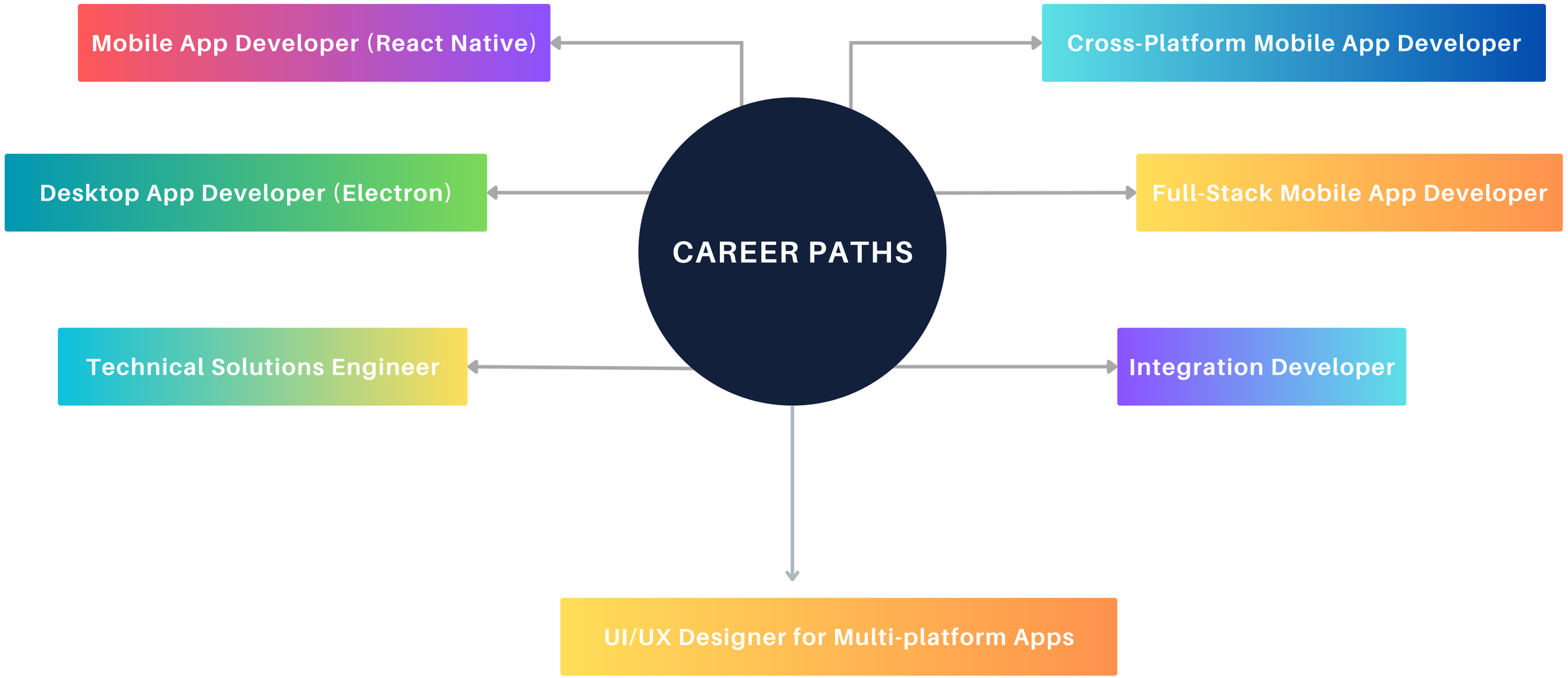
OTHER CAREER

PATHS

FULL-STACK DEV

GETTING STARTED


Mobile App Developer (React Native)
Cross-Platform Mobile App Developer
Desktop App Developer (Electron)
CAREER PATHS
Full-Stack Mobile App Developer
Technical Solutions Engineer
Integration Developer
UI/UX Designer for Multi-platform Apps

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REQUIRED SKILLS

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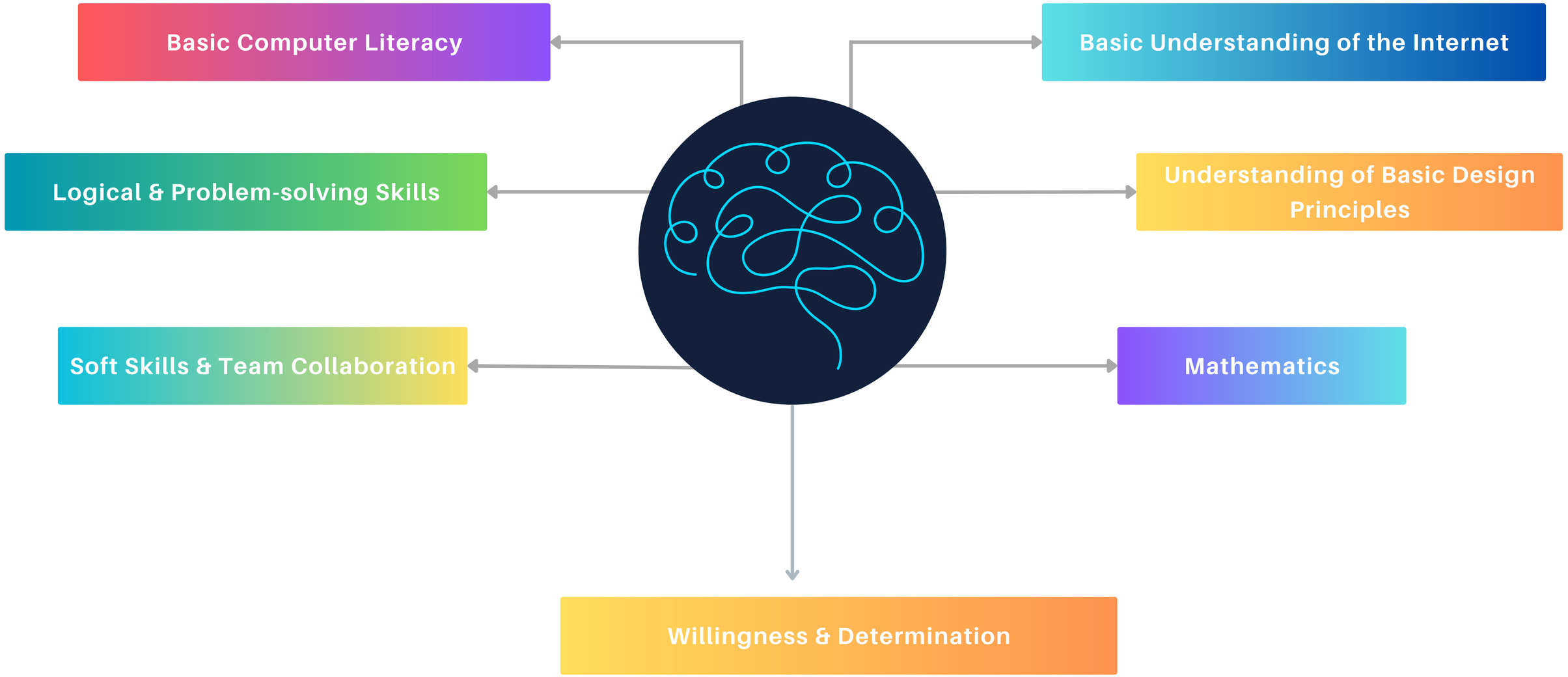
GETTING STARTED


Basic Computer Literacy
Basic Understanding of the Internet
Logical & Problem-solving Skills
Understanding of Basic Design Principles
Soft Skills & Team Collaboration
Mathematics
Willingness & Determination

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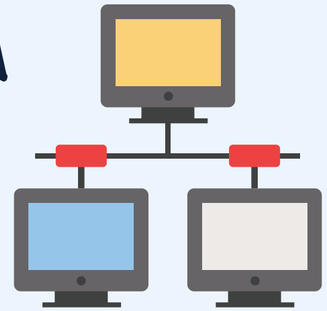
HOW INTERNET WORKS

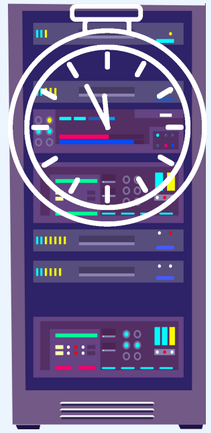
GETTING STARTED

HOW INTERNET WORKS

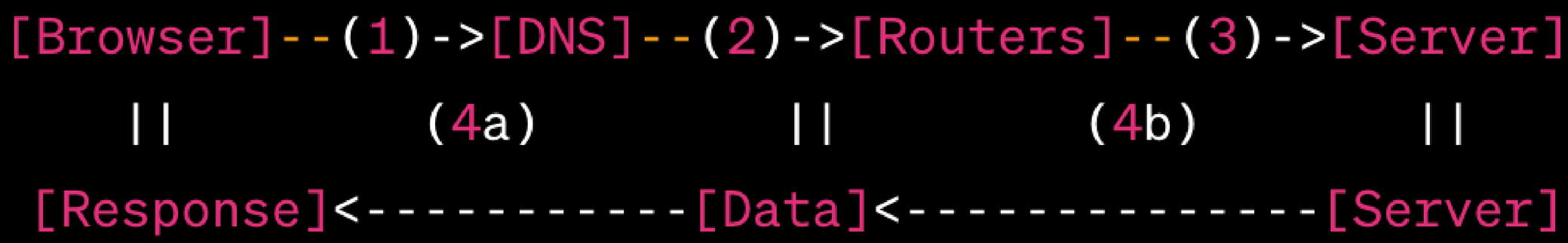
DNS (Domain Name System)



Routing Request (interconnected network)



Target server

Display the result

HOW INTERNET WORKS