JUNIOR FULL STACK DEVELOPER

Program Summary: Generation Singapore's junior full stack developer program is a fully blended bootcamp that runs for 12 weeks at 7 hours per day. The course curriculum prepares participants for entry-level software developer roles. Developers may work in tech based startups, mid-large size software development companies, consultancy firms, among others, to develop test and finalize solutions. Students participate in a mixture of asynchronous independent learning and synchronous instructor-led sessions throughout the bootcamp. Generation puts a heavy emphasis on behavioral skills and mindsets needed for this role. Students receive instruction on the "soft skills" and get many opportunities to practice them.

Core Technical Skills
- Introduction to the software developer role (problem solving, staying up to date, workplace communication)
- Programming fundamentals (coding foundations, Git and GitHub, scrum, command lines) ● Web Development Fundamentals (HTML, CSS, Bootstrap)
- JavaScript for Web Development (basic data types, operators, conditionals, scoping, program flow, object-oriented framing, asynchronous JavaScript and requests, DOM manipulation, unit testing using Mocha)
- React
- Introduction to Relational Databases (SQL)
- Java Programming fundamentals (Hello World and variables, object oriented Java using classes, conditionals and control flow, arrays, array lists, loops, strings, inheritance and polymorphism, debugging and unit testing with JUnit)
- Object Oriented Programming in Java (user interaction, inheritance, collections)
- Java and Spring boot for Web Development (dependencies injection using Spring Framework, Spring Data JPA, REST API, Secure API using JWT, unit testing, web applications build and deploy) ● Data Structures (linear data structures, hash maps and algorithmic concepts, nonlinear data structures and sorting algorithms, interview prep and algorithm practice)

Mindsets	Behavioural Skills
● **Growth Mindset**: I believe I can learn and improve over time with practice. ● **Persistence**: I do not give up in the face of challenges or after I have made a mistake. ● **Personal Responsibility**: I take ownership over my work and decisions. I work hard, keep commitments, and do not make excuses. ● **Future Orientation**: I set goals for the future, understand how my actions will help me achieve them, and frequently check my progress.	● **Proactiveness**: I take the lead on the work I am responsible for and look for other ways to contribute. ● **Communication**: I can convey my message clearly to different types of people using a variety of tools to receive and spread information. ● **Orientation to Detail**: I maintain a close eye for detail when executing tasks so they are completed with precise accuracy and thoughtfulness. ● **Teamwork**: I communicate and collaborate with my team, ask for help when I need it, and offer them support.

Employment essentials
- Building a Digital Presence
- Career Pathways
- Resumes Workshop
- Interview practice
- Building a portfolio

CLOUD SUPPORT & DEVOPS

Program summary: Generation Singapore's Cloud Support and Dev Ops program is a fully blended bootcamp that runs for 12 weeks at 7 hours per day. This curriculum prepares participants for the Cloud Dev Ops Engineer role. Cloud developers perform the coding and software engineering that brings the architect's vision to life. They merge traditional programming skills with specialized knowledge in one or more of the leading cloud platforms' development environments to build, deploy and optimize cloud-based applications.

Core technical skills:
- Introduction to the Role (Introduction to the Curriculum, Introduction to the Role, Effective Workplace Communication and Collaboration, Staying up to Date, Problem Solving)
- Learn Python (Getting Started With Python, Basic and Intermediate Scripting, Libraries, Pip, and Virtualenv, Building a Web Application with Python and Flask)
- Linux Essentials (Open Source, Finding Your Way, Command Line, Operating System, Security) ● DevOps Essentials (DevOps Theory and Practice, Source Control with Git, Containerization with Docker)
- Microsoft Azure Fundamentals (AZ-900) (Cloud concepts, Azure architecture, Compute, Networking, Storage, Database, Authentication and authorization, Azure solutions, Security, Privacy, compliance and trust, Pricing, Support)
- Automating Everything (Configuration Management with Ansible, Infrastructure as Code with Terraform)

Mindsets	Behavioural Skills
● **Growth Mindset:** I believe I can learn and improve over time with practice. ● **Persistence:** I do not give up in the face of challenges or after I have made a mistake. ● **Personal Responsibility:** I take ownership over my work and decisions. I work hard, keep commitments, and do not make excuses. ● **Future Orientation:** I set goals for the future, understand how my actions will help me achieve them, and frequently check my progress.	● **Customer Service:** I honour the client's needs and preferences, pamper them by sharing them my full attention and expertise, and ensure they have a smooth experience. ● **Communication:** I can convey my message clearly to different types of people using a variety of tools to receive and spread information. ● **Teamwork:** I communicate with my team, ask for help when I need it, and offer them support. ● **Orientation to Detail:** I maintain a close eye for detail when executing tasks, so they are completed with precise accuracy and thoughtfulness.

Employment essentials
- Building a Digital Presence (LinkedIn workshop, networking on LinkedIn)
- Career Pathways
- Resumes Workshop
- Interview practice
- Building a portfolio

BUSINESS INTELLIGENCE & DATA ANALYST

Program Summary: Generation Singapore's Business Analyst and Data Analyst program is a fully blended bootcamp that runs for 12 weeks at 7 hours per day. In this entry level role, professionals are responsible to handle the data management activities such as collecting the data from internal and external data sources (big data), building the data structure to store the data captured, and loading the data into the data systems (such as data lake). They have good understanding in different types of database systems such as traditional relational databases and modern big data management platforms, and the data transformation techniques. They work closely together with data scientists and data analysts and are the key members supporting the data warehouse, business intelligence and machine learning related projects.

Core technical skills:
- Introduction to Curriculum and Role
- Data Management (Overview of Data Engineering Toolbox, Introduction of Databases Design and Usage of Data Lake, Data Warehouse and Data Mart, Introduction of Cloud Data Management Platform – Azure) • Programming Languages (SQL and Python, Electives: Scala, Shell Scripts, Usage of APIs) • Developing Data Pipelines (Handling of Structured, Semi-structured and Unstructured Data, Developing Data Pipeline - Batch Data, Developing Data Pipeline - Real-time Data (advanced), Source Control) • Data Analysis and Visualization (Introduction of Data Visualization , Effective Data Analysis by Applying Descriptive Statistics, Analyzing Data with PowerBI, Electives: Tableau, Data storytelling, Introduction of Predictive Modelling and Machine Learning)
- Testing (Introduction to Testing Cycles,Test Approach and Test Case Design)
- Project Management Basics (Introduction to Agile Fundamentals, Best Practices and Documentation)

Mindsets	Behavioural Skills
• **Growth Mindset:** I believe I can learn and improve over time with practice. • **Persistence:** I do not give up in the face of challenges or after I have made a mistake. • **Personal Responsibility:** I take ownership over my work and decisions. I work hard, keep commitments, and do not make excuses. • **Future Orientation:** I set goals for the future, understand how my actions will help me achieve them, and frequently check my progress.	• **Proactiveness:** I take the lead on the work I am responsible for and look for other ways to contribute. • **Communication:** I can convey my message clearly to different types of people using a variety of tools to receive and spread information. • **Orientation to Detail:** I maintain a close eye for detail when executing tasks so they are completed with precise accuracy and thoughtfulness. • **Teamwork:** I communicate and collaborate with my team, ask for help when I need it, and offer them support.

Employment essentials
- Building a Digital Presence (LinkedIn workshop, networking on LinkedIn)
- Career Pathways
- Resumes Workshop
- Interview practice
- Building a GitHub portfolio