

ICS Resource Guide



Software Development Phases	Professional Roles	Skills	Tools	Degrees	Resources
Discovery and Planning	Business Analyst Product Owner Project Manager	Organizational Skills Communication Skills Problem-Solving Analytical Thinking Project Management Frameworks Technical Documentation	MS Office MS Project Jira Confluence Slack Monday.com Trello	Computer Science - BS (CS) Business Administration – BBA Information Technology - BS (IT) Business & Information Technology - BBIT	Free Critical Thinking & Problem Solving Slack! Getting Started Guide Jira (YouTube) Confluence (YouTube) Monday.com Trello (YouTube) College Wallah (YouTube) Simplilearn (YouTube) Great Learning (YouTube) Paid Agile Software Development (Coursera) The Complete Product Management Fundamentals Course (Udemy) Digital Product Management: Modern Fundamentals (Coursera) Project Management Principles and Practices Specialization (Coursera)

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Designing The Blueprint - Software Design	UI Designer UX Designer Graphic Designer	User-Centered Design Proficiency in Design Tools Creativity Attention to Detail	Figma Adobe Photoshop Adobe XD Adobe Illustrator Sketch Canva Invision	Bachelor of Multimedia Arts Degree (NCA) Product Design (4 yrs Degree) Visual Communication Design BS Computer Sciences (CS) BS Information Technology (IT)	Free Fundamentals of Figma Figma Design Basics and Features Introduction to Illustrator UI/UX Design using Adobe XD Figma (YouTube) Adobe Photoshop (YouTube) Adobe XD (YouTube) Adobe Illustrator (YouTube) Canva (YouTube) Invision (YouTube) Flux (YouTube) CharliMarieTV (YouTube) Freecodecamp.org (YouTube) Lets Uncover (YouTube) Paid Google UX Design Professional Certificate (Coursera) Canva Design School

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Building The Dream – Development	Software / Full Stack Developer Software Architect Front-End Developer Back-End Developer	Proficiency in Coding Languages Analytical Thinking Algorithm Design SDLC Frameworks Collaboration	Programming Languages like (HTML, JavaScript, PHP, .NET, JAVA, C#, etc.) Git JIRA Web Development/ E-commerce WordPress, Shopify, etc. Postman	Computer Science - BS (CS) Software Engineering - BS (SE) Computer Engineering - BS (CE)	Free Introduction to HTML and CSS Intro to JavaScript Learn php C# Fundamentals for Absolute Beginners Critical Thinking & Problem Solving Algorithms Software, Programming, and Database Basics Git and GitHub Version Control Shopify Course For Beginners Shopify Course Introduction to Postman API Postman API Fundamentals Git (YouTube) C# (YouTube) JavaScript (YouTube) HTML (YouTube) freeCodeCamp.org (YouTube) Programming with Mosh (YouTube) Traversy Media (YouTube) Gatesmashers (YouTube) The AI Advantage (YouTube) Kryll.io (YouTube) Paid CS50's Introduction to Computer Science (edX) Python for Everybody (Coursera) Database Management Essentials (Coursera) Introduction to AI (Coursera)

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Building The Infrastructure – Networking and DevOps	DevOps Engineer Network Administrator Systems Engineer Cloud Engineer Database Administrator (DBA) Information Security Engineer	Collaboration Scripting and Automation Version Controlling Infrastructure as a Code Containerization Monitoring and Logging Firewall and Security	CI/CD Pipe Lines, (Jenkins) GIT Containerization (Docker, kubernetes) Cloud Infrastructure (AWS, Azure) Vmware Windows / Linux	Computer Science - BS (CS) Software Engineering - BS (SE) Computer Engineering - BS (CE) Cyber Security - BS (CY) BS Computer Network and Security	Free The Big Book of Small Python Projects Introduction to AWS Cloud Computing Docker Essentials AWS Cloud Technical Essentials AWS Cloud Practitioner Essentials Microsoft Azure Fundamentals LinuxFoundationX: Introduction to Linux edureka! (Jenkins) (YouTube) FreeCodeCamp (AWS) (YouTube) Edureka (DevOps) (YouTube) Gatesmashers (YouTube) Simplilearn (YouTube) Paid DevOps on AWS Specialization (Coursera) Google Cloud Fundamentals (Coursera)

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Ensuring Quality – Quality Assurance and Support	QA Engineer Test Automation Engineer Quality Assurance Analyst	Knowledge of SDLC Multiple Testing Techniques (Test Case, Regression, Smoke, Integration, Stress, API) Critical & Analytical thinking Programming Skills Test Case Writing	Selenium Jira / Slack Cypress Postman / Jmeter Appium Confluence	Computer Science - BS (CS) Software Engineering - BS (SE) Computer Engineering - BS (CE) Information Technology – BS (IT)	Free Python for Everybody JMeter Tutorial for Beginners Software Testing Training Summary Selenium Webdriver The basics of using Python 3 JSON and Natural Language Processing Mobile Automation with Appium in JavaScript Automation Step by Step (YouTube) JMeter - Automation Step by Step (YouTube) Confluence (YouTube) Software Engineering (YouTube) Edureka (YouTube) Paid Software Testing and Automation Specialization (Coursera)

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Managing The Data – Data Management	Data Engineer Data Analyst Machine Learning /AI Engineer	Critical & Analytical Thinking Programming Skills Database Skills Statistics and Mathematical Skills Deep Learning / Neural network Data Representation	Programming Languages (Python, R, JavaScript, SQL, etc.) Cloud Computing (AWS, Azure, GCP) Kafka, Hadoop	Artificial Intelligence - BS (AI) Data Sciences – BS (DS) Computer Science - BS (CS) Software Engineering - BS (SE) Computer Engineering - BS (CE)	Free Python for Everybody The basics of using Python 3 Database Design and Basic SQL R Programming Language Introduction R - for Programmers Microsoft Azure Fundamentals Google Cloud Skills Boost Edureka (Azure) (YouTube) Edureka (Google Cloud Platform) (YouTube) Conduktor (Kafka) (YouTube) Simplilearn (Hadoop) (YouTube) Freecodecamp.org (YouTube) Edureka (YouTube) Data Engineering (YouTube) Introduction to AI (Coursera) The AI Advantage (YouTube) Kryll.io (YouTube) Paid Applied Data Science with Python Specialization (Coursera) Cloud Data Engineer (Coursera) Data Analyst (Udacity)