**Part I - The Basics**

* **INTRODUCTION**
  + **What is Serverless/AWS Lambda and why create Serverless apps?**
    - Stateless functions run in a container managed by AWS
    - Low maintenance, low cost, easy to scale
* **SET UP YOUR AWS ACCOUNT**
  + **Create an AWS account (Free tier)**
  + **Create an IAM user and configure the AWS CLI**
    - Grant admin rights and programmatic access
    - aws configure
* **SETTING UP THE SERVERLESS BACKEND**
  + **Create a DynamoDB table**
  + **Create an S3 bucket for file uploads**
  + **Create a Cognito user pool**
    - **Create a Cognito test user**
  + **Set up the Serverless Framework**
    - **Add support for ES6/ES7 JavaScript**
* **BUILDING A SERVERLESS REST API**
  + **Add a create note API**
  + **Add a get note API**
  + **Add a list all the notes API**
  + **Add an update note API**
  + **Add a delete note API**
* **DEPLOYING THE BACKEND**
  + **Deploy the APIs**
  + **Create a Cognito identity pool**
    - **Cognito user pool vs identity pool**
  + **Test the APIs**
* **SETTING UP A REACT APP**
  + **Create a new React.js app**
    - **Add app favicons**
    - **Set up custom fonts**
    - **Set up Bootstrap**
  + **Handle routes with React Router**
    - **Create containers**
    - **Adding links in the navbar**
    - **Handle 404s**
  + **Configure AWS Amplify**
* **BUILDING A REACT APP**
  + **Create a login page**
    - **Login with AWS Cognito**
    - **Add the session to the state**
    - **Load the state from the session**
    - **Clear the session on logout**
    - **Redirect on login and logout**
    - **Give feedback while logging in**
  + **Create a signup page**
    - **Create the signup form**
    - **Signup with AWS Cognito**
  + **Add the create note page**
    - **Call the create API**
    - **Upload a file to S3**
  + **List all the notes**
    - **Call the list API**
  + **Display a note**
    - **Render the note form**
    - **Save changes to a note**
    - **Delete a note**
  + **Set up secure pages**
    - **Create a route that redirects**
    - **Use the redirect routes**
    - **Redirect on login**
* **DEPLOYING A REACT APP ON AWS**
  + **Deploy the Frontend**
    - **Create an S3 bucket**
    - **Deploy to S3**
    - **Create a CloudFront distribution**
    - **Set up your domain with CloudFront**
    - **Set up www domain redirect**
    - **Set up SSL**
  + **Deploy updates**
    - **Update the app**
    - **Deploy again**

**Part II - Automation**

* **INTRODUCTION**
  + **Getting production ready**
* **CREATE A NEW BACKEND**
  + **Initialize the backend repo**
    - **Organize the backend repo**
* **INFRASTRUCTURE AS CODE**
  + **What is Infrastructure as Code?**
    - **Configure DynamoDB in Serverless**
    - **Configure S3 in Serverless**
    - **Configure Cognito User Pool in Serverless**
    - **Configure Cognito Identity Pool in Serverless**
  + **Use environment variables in Lambda functions**
  + **Deploy your Serverless infrastructure**
* **ADDING A STRIPE BILLING API**
  + **Working with 3rd party APIs**
    - **Setup a Stripe account**
    - **Add a billing API**
    - **Load secrets from env.yml**
  + **Test the billing API**
* **ADDING UNIT TESTS**
  + **Unit tests in Serverless**
* **AUTOMATING SERVERLESS DEPLOYMENTS**
  + **Automating Serverless deployments**
    - **Setting up your project on Seed**
    - **Configure secrets in Seed**
    - **Deploying through Seed**
    - **Set custom domains through Seed**
  + **Test the configured APIs**
  + **Monitoring deployments in Seed**
* **CONNECT TO THE NEW BACKEND**
  + **Initialize the frontend repo**
    - **Manage environments in Create React App**
* **ADDING A BILLING FORM**
  + **Create a settings page**
    - **Add Stripe keys to config**
    - **Create a billing form**
    - **Connect the billing form**
* **AUTOMATING REACT APP DEPLOYMENTS**
  + **Automating React Deployments**
    - **Create a build script**
    - **Setting up your project on Netlify**
    - **Custom Domains in Netlify**
  + **Frontend workflow**
* **CONCLUSION**
  + **Wrapping up**
  + **Futher reading**
  + **Giving back**
  + **Changelog**
  + **Staying up to date**

**Extra Credit**

* **SERVERLESS ARCHITECTURE**
  + **Organizing Serverless projects**
  + **Cross-stack references in Serverless**
    - **DyanamoDB as a Serverless service**
    - **S3 as a Serverless service**
    - **API Gateway domains across services**
    - **Cognito as a Serverless service**
  + **Deploying multiple services in Serverless**
* **BACKEND**
  + **API Gateway and Lambda Logs**
  + **Debugging Serverless API Issues**
  + **Serverless environment variables**
  + **Stages in Serverless Framework**
  + **Configure multiple AWS profiles**
  + **Customize the Serverless IAM Policy**
  + **Connect to API Gateway with IAM auth**
  + **Serverless Node.js Starter**
* **FRONTEND**
  + **Code Splitting in Create React App**
  + **Environments in Create React App**