NOUR RAYAN

SENIOR SOFTWARE ENGINEER

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Portfolio: http://www.nour-rayan.co.uk

GitHub: https://github.com/n6rayan

SKILLS

Development:

- Node
- TypeScript
- React
- SQL (Postges / MySQL)
- Nest.js
- MongoDB
- Redis
- Bull Queues

Infrastructure:

- AWS
- Docker
- Terraform
- Serverless
- Kubernetes
- API Gateway

Version Control:

- Git
- Bitbucket
- GitHub

Project Management:

- JIRA
- Trello
- Kanban
- Scrum
- Notion

EXPERIENCE

F1 Arcade

Software Engineer (Contract) | June 2023 - December 2023

- As a contractor, I was responsible for delivering the API of a new type of racing mode at the F1 Arcade venue called All Venue Racing. This was a game mode which allowed multiple simulators across the venue to race against each other. The API was developed for the venue staff to be able to manage all the different racing sessions. It was developed using the Nest.js framework and utilised MongoDB as its data storage. I also had to collaborate with an external development team responsible for building out the client side of this racing which involved writing an OpenAPI specification and weekly progress calls.

- Worked on rebuilding out their Booking API to move away from a third-party booking system, Design My Night. This involved completely rebuilding the system by moving to micro-services. All these micro-services were host in EKS within AWS and utilised Bull queues for inter-service communication. The services adopted Postgres as a data storage with each service having its own micro-schema used for holding its own relevant booking data.

- The Booking API rebuild involved integrating with the payment provider Adyen to handle payments/transactions. We had to deal with webhook events from Adyen and validate HMAC signatures

appropriately to ensure the events were legitimate Adyen events. Off the back of this, a lot of downstream processes would happen such as creating the booking in the database, updating relevant bull jobs with various payment data etc.

- Various planning/whiteboard sessions took place to plan out what each service would do. I also had to go away and write up tech specs for each service to ensure it was clearly documented.

BCG Digital Ventures

Software Engineer (Contract) | January 2023 - June 2023

- Brought on board to build out the backend of a greenfield health-tech project for the end client, Simply Health. The project was an online booking platform where practices/practitioners could sign up. They could then define the list of dental treatments they wished to offer and onboard patients whilst assigning them to a specified treatment.

- This role involved defining a lot of the processes to help us all work better as a development team. Processes such as how do we go from developing our feature branches to getting them deployed to an environment and everything in between.

- The infrastructure of the platform was defined using AWS CDK in TypeScript.

- The application was hosted on AWS utilising an RDS Postgres instance for data storage, with the API being built in Express.js and subsequently bundled into a single Lambda connected to an API Gateway.

- Prisma was utilised as an ORM of choice for its TypeScript support and various other out-of-the-box features such as it's easy way to define migrations and it's easy to use database querying.

- Unit and integration tests were written using Jest as part of developing our feature branches.

- Finally, as a CI/CD tool, we used GitHub actions to perform various tasks such as running our tests, making sure the code hit a certain standard with certain tools like ESLint and Prettier and deploying our code to the defined environments.

TOCA Social

Software Engineer (Contract) | May 2021 - December 2022

- Initially brought on to build out the company's payment system for the ability to pay for bookings being made online. The system was built out using a Serverless infrastructure, utilising the Serverless framework. It used Stripe as a payment provider and stored transactions in a DynamoDB table. Later on was reworked to store data in AWS' RDS instances and a MySQL database which involved migrating all existing data from Dynamo.

- After launch, I became responsible for the backend (and front end for one) of multiple services e.g. payments , bookings, reception desk, kiosk, and the game management system. I was tasked with adding multiple features to each of these services such as the ability for customers to book more than one box for their game time and the introduction of new price points i.e. peak prices for different days/times of the week.

- Oversaw an external development company that was brought in to build out TOCA's schedule management system, a system that allows for admins at TOCA to define bookable slots which linked so heavily to the booking system

- Constantly inspiring change and helping us focus more towards being a tech team i.e. improving processes and even orchestrated the move from G-Chat to Slack

- Main support Engineer to overcome high priority production bugs/issues

- Outputting clear and concise documentation to allow for TOCA's more junior permanent members to get up to speed and on-boarded more quickly

- Containerised TOCA's whole online booking flow using Docker, giving Engineer's the ability to develop feature branches locally and test them alongside the other essential services

- Providing assistance to the new DevOps Engineer by running through TOCA's Terraformed infrastructure and deployment pipelines

- Assisted in cost saving projects to reduce unused infrastructure and AWS resources saving the company up to thousands of pounds every month

- Planned out the leaderboard service and designed the database schema giving TOCA's new Engineer's the building blocks of which to store the leaderboard data and expose it over an API Gateway

NewsUK

Software Engineer (Permanent) | March 2020 - May 2021

- Mentored and onboarded every new member that joined the team.

- Dealt with support queries of production issues using tools such as New Relic for Application Performance Management (APM) and DataDog for logging.

- Worked closely with a UI/UX Designer to make various improvements to user facing tools.

- Single handedly implemented curation capability for Subject pages - a new aspect of content for The Times and Sunday Times editors - into the teams main tooling. This involved building out the Node/Express API and expanding out the frontend React application. Other tasks included updating the SQL schema to include a new field to allow for differentiating of other types of content as well as running SQL migrations using Sequelize to update/remove production data.

- Implemented a whole range of functional end to end tests using Cypress to allow for catching of any breaking changes to core functionality when new features were implemented.

- Various improvements made to CircleCI pipelines to allow for quicker deployment times e.g. running tests in parallel, only installing necessary production dependencies and using alpine versions of Node Docker images to decrease build times.

- Only Engineer responsible for building upon and maintaining the Apple News integration – a Lambda function written in TypeScript, hosted within AWS that pushed any of The Times and Sunday Times content over to Apple News. Additional features added include a retry mechanism using an SQS queue to retry any articles that had failed due to Apple News API issues. This saved a lot of supports queries due to our stakeholders not having visibility on specific articles failing to push through.

- Achieved a massive bit of work splitting out the API Gateway/Lambda infrastructure - used for updating edition and article publish times inside of the editorial CMS – into three separate environments. This was done to avoid API key quotas being hit with each application getting its own key for the various environments. The new resources were all defined via Terraform and migrated onto CircleCI to allow for easier, more efficient deployments.

Broadbean Technology

Software Developer (Permanent) | May 2018 - March 2020

- Solely responsible for adding a queuing mechanism to the Selenium automation server for allowing autoscaling when loads were high and increasing concurrency for multiple tasks to be performed.

- Part of a 3-man micro development unit responsible for rebuilding the companies biggest partner integration which went live with no production issues. My main involvement in this was rewriting the integration with the company's Candidate Search platform which included mapping candidate data to a more recognisable format, integrating with the newest version of the Candidate Search API (migrating from XML to JSON).

- Rewrote a legacy internal Client Support tool migrating to a Node backend and a React frontend, originally written in Perl and plain HTML/CSS respectively which led to better performance of the tool overall.

Broadbean Technology

Senior Integrations Developer (Permanent) | October 2017 - May 2018

- Mentored and onboarded every new junior developer.

- Part of a 3-man micro development unit that aided in developing an application that effectively eliminated a third-party manual job posting service saving the company an estimated £750K per annum. My main involvement in this was running a Selenium server which was used as a bot to scrape clients recruitment sites and input job details into their job posting forms. It also included building out a Node/Express API to accept various details of a job posting which would subsequently be pushed onto the Selenium server.

- Trusted with looking after one of the company's key clients which included weekly calls, building all their integrations with the main products and dealing with any support queries.

Broadbean Technology

Integrations Developer (Permanent) | August 2016 - October 2017

- Integrating various clients with the business's job multi-posting and candidate search software.

- Handled technical support queries from clients and their trusted developers.

EDUCATION

- **Kingston University**

  September 2013-July 2016

  Bachelor of Computer Science, achieving a 2:1

- **Douay Martyrs (Sixth Form)**

  September 2011-May 2013

  Achieved A*-C in the following: Mathematics, Applied ICT & Applied ICT (Double Award)