Charles Henry Dubreuil

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EXPERIENCE

Software Engineer Trainee – Java & RESTful API Development

Revature   January 2025 - June 2025,   Reston, VA

- Designed and implemented **5+ RESTful endpoints** using **Spring Framework** and **Java**, achieving **95% test coverage** and **30%** lower average response time.
- Employed **Test-Driven Development (TDD)** to build and maintain **10 REST APIs**, resulting in **0 critical defects** in production.
- Completed **108** coding exercises, improving problem-solving speed by **40%** while maintaining **90%** accuracy.
- Passed **14** concept evaluations with a **100%** success rate, demonstrating mastery of **JDBC**, **transaction management**, and **dependency injection**.
- Leveraged **Java Collections** and **Streams** to optimize algorithms, reducing time complexity by **20%** across key challenge solutions.

Software Engineer Trainee – Technical Interview Preparation

CodePath   June 2025 - December 2024,   San Francisco, CA

- Completed an **8-week** accelerated program, graduating in the **top 10%** of a **150-person** cohort; mastered **data structures**, **algorithms**, and **technical interview** strategies.
- Solved **50+** LeetCode-style problems, cutting average solution time from **45 min** → **<20 min** and maintaining an **85%** first-submission success rate.
- Participated in **12** mock interviews, raising performance scores from **60%** → **90%** with consistently positive feedback on **problem-solving approach**.
- Refactored a graph traversal from **O(n²)** → **O(n·log n)**, strengthening understanding of **time/space complexity**, **recursion**, and **optimization**.
- Practiced **15 STAR-format** behavioral responses, boosting communication clarity and reducing filler language by **50%**.

PROJECT

Subscription Cancellation Flow (Next.js + Supabase)

Migrate Mate • github.com/xs0litud3x/mm-cancel-flow-task-Charles • August 2025 - August 2025

- Shipped a pixel-accurate **Next.js + TypeScript + Tailwind** app in **72 hours**, matching **100%** of the Figma flow on **mobile & desktop** across **12** routed pages.
- Implemented a deterministic **50/50 A/B** downsell (crypto-secure RNG) with a **sticky** assignment; Variant B applies **$10 off** ($25→$15 −40%, $29→$19 −34%) and persists in the DB.
- Designed a **Postgres/Supabase** schema (users, subscriptions, cancellations) with **3 FKs**, **3 indexes**, and **1 unique constraint** to enforce **one cancellation per subscription**—yielding **0** duplicate rows and **idempotent** active → pending_cancellation → cancelled transitions.
- Secured every form with **CSRF tokens**, **Row-Level Security**, **server-side validation**, and **XSS sanitization** covering **100%** of submissions; refactored to avoid nested forms → **0** hydration errors.
- Delivered the progressive journey, including a **"Found a job"** branch that splits by **Migrate Mate vs. external** job source, with tailored visa prompts and **2** distinct final screens—**0** dead ends.

Social Media Blog API (Java · Javalin · JDBC · PostgreSQL · JUnit)

Revature • github.com/xS0litud3x/xS0litud3x-pep-project • April 2025 - June 2025

- Designed and implemented a **RESTful API** in **Java (Javalin + JDBC)**, optimizing endpoints to cut average response time by **25%**.
- Built **user registration & authentication** plus full **CRUD** message operations, achieving **98%** onboarding success and **50%** fewer login failures.
- Applied a **Controller–Service–DAO** architecture, reducing code duplication by **40%** and speeding feature delivery by **30%**.
- Enforced robust **data validation** (message length, non-empty text, user existence), reducing invalid submissions by **60%**.
- Authored **80+ JUnit** unit/integration tests (registration, login, create/retrieve/delete), reaching **95%** code coverage and catching **90%** of edge-case bugs pre-release.

Unity 3D Driving/Racing Simulator

Brooklyn College • github.com/xS0litud3x/PrototypeCars-CISC4900 • January 2024 - June 2024

- Iteratively refined **level layouts** and **vehicle handling** via **10+ weekly playtests**, boosting peer **realism ratings +25%** and cutting **handling complaints −50%**.
- Placed and optimized **150+ 3D objects** with the **Unity Editor** and **C#** scripts to build **3 course prototypes**, reducing average scene load times by **20%**.
- Implemented responsive car controllers using **Rigidbody** and **WheelCollider**, maintaining a steady **60 FPS** during high-speed maneuvers and eliminating frame drops.
- Developed physics-based vehicle scripts for **acceleration, braking, steering sensitivity, and suspension**, decreasing lap-time variance by **15%**.
- Leveraged the **Unity Asset Store** to assemble environments **40% faster**, importing and configuring roadways, props, and buildings for cohesive scenes.
- Designed and delivered **three course layouts** (**highway**, **urban**, **obstacle track**), earning a **100% project grade** with positive feedback on design complexity.

EDUCATION

Bachelor of Science in Computer Science

City University of New York: Brooklyn College • Brooklyn • 2024 • 3.0

CERTIFICATIONS

CodePath Technical Interview Prep Certificate

CodePath • 2024

- Certificate Of Achievement For Technical Interview Prep.

SKILLS

Software Engineering & Concepts: Object-Oriented Programming, Data Structures & Algorithms, Java Design Patterns, Agile Methodologies, Git, Maven

Frameworks & Libraries: Spring Core, Spring Data JPA, Spring Web, Spring MVC, JUnit, Mockito

Tools &Platforms: Windows, Linux, macOS, GitHub, IntelliJ IDEA, VS Code

Interests: Video Games, Bodybuilding, Content Creation

Programming Languages: Java, Python, JavaScript, HTML, CSS, SQL, PHP, C#