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Programming

TypeScript
JavaScript
Python
Java
Bash
C
R
VBA
MatLab

QA Tools & Systems

ACTS
CodeCov.io
Docker
Coverage
Espresso
GitHub Actions
Jest
JUnit5
Mockito
MutPy
Pitest
Pytest
SonarQube
Selenium
unittest
Travis CI

Apu (Md Touhidul) Islam

Software Development Engineer

Professional Experience

Jan.22 - Current **SDE I (L4) (Full-time)**

Amazon Development Centre Canada ULC

KPI Metrics:

- Developing and maintaining KPI metrics for availability and latency calculation — *Carnaval, Ion*

Design Architecture:

- Design software architecture for better exception handling — *Java, Datapath*

Sep.20 - Oct.21 **Junior Developer (Full-time)**

Ghostlab Inc., Edmonton, AB

GhostKeycloak:

- Developing an identity and access control management system using Keycloak, modified with custom authentication flow for phone-based access control used to secure all the company-wide applications — *Java, JBoss, Maven, Docker, Twilio APIs, JUnit5, Mockito, Postgres*
- Incorporating Keycloak to secure frontend applications — *Angular, Svelte*
- Incorporating Keycloak to secure backend application — *NestJs, TypeScript*

GhostKYC:

- Incorporating an automated KYC verification system customized to tailor company's compliance need to verify customers on company's ATMs and websites (desktop and mobile) — *JavaScript, Sum&Substance APIs, NestJs, Jest, Postgres*

GhostLogger:

- Developing a custom logging library deployed in the private npm repository used in all the projects to facilitate production and development logs — *TypeScript, Log4Js, Jest*
- Setting up a log aggregation system to facilitate data analytics — *Splunk*

GhostCheckout:

- A secure online platform for users to sell different digital currencies or buy different digital currencies using credit cards, and bank transfer, and using those different digital currencies to pay bills, buy gift cards, and sending coins — *Svelte, Svelte-kit, Vite, Tailwind CSS, i18n Localization, Angular, Keycloak, Sumsub, Google ReCaptcha, Google Analytics, NestJs, Jest*

GhostTransactions:

- A secure centralized backend system used for handling the transaction logistics for both ATMs and Websites — *Typescript, NestJs, Jest, Postgres, TypeORM*

GhostFunding:

- Incorporating Berkeley service to allow clients to use credit cards to fund their accounts — *Pungle APIs, Typescript, NestJs, Jest, Postgres, TypeORM*

GhostPoS:

- Developing a clover device based POS system to allow merchants to accept payment in digital currencies — *Android, Java, JUnit5, Mockito, Gradle*
- Creating a secure backend to manage the clover transactions — *TypeScript, GRPC, RxJS, Postgres, TypeORM*

GhostToastie:

- Developing a slack app used for recognizing company-wide successes to inspire the respective employees — *TypeScript, Slack APIs, MongoDB*

BitcoinWell:

- Developing a website that will allow customers to buy and sell just by being KYC verified and without having a centralized account (<https://bitcoinwell.com/>) — *JavaScript, EJs, HTML5, CSS, ExpressJs, NodeJs, SumSub, Google ReCaptcha, Google Analytics, Gigadat Interac, MapBox, Google Map APIs, CouchDB*
- Automatizing Ops team report generation — *Google Script, CoinATMRader APIs*
- Developing a CMS system for the Ops team and training the team — *WordPress, php*

Deployment & Team Environment:

- Reverse proxy set up — *Trafik, Nginx*
- Setting up CI pipeline — *Bitbucket, SonarCloud*
- Setting up staging and production environment — *AWS EC2, S3, AuroraDB, Digital Ocean*

Miscellaneous:

- Actively participating in Ghostlab's **BookClub** discussions for professional development
- Winner of all the Ghostlab **Hackathons** (Nov 8, 2020 & Apr 1, 2021)

General Tools & Systems

Adobe CS
Angular
Bootstrap
CouchDB
CSS3
Django
Django Rest
ElasticSearch
Express
G Suite
GNU/Linux
HTML5
JetBrains
JSON
MS Office
Material UI
MongoDB
MySQL
NestJs
Postgrsql
React
Rest API
Semantic UI
SourceTree
SQL
Svelte
SvelteKit
Tailwind
VS Code
Webpack
Windows
W3C Standards
XML

Languages

English
Bengali
Hindi
Urdu
French

Interests

Culture
Languages
Music
Online Courses

Professional Experience

- Jul.20 - Sep.20 **Junior Developer (Full-time)** StreetText, Kelowna, BC
- Extending an existing custom Rapid Application Development (RAD) framework based CRM that facilitates the real estate agents to put up customizable ads on Facebook to generate leads (<https://streettext.com/signin>) — *MVC, PHP, JavaScript, RequireJs, Laravel Eloquent ORM, Facebook APIs, Google Map APIs, Twilio APIs, MySQL*
 - Setting up a quality gate CI with automated mutation and unit testing to generate a robust coverage report — *GitHub Actions, Jest, Stryker, SonarQube*
 - Creating end to end functional and acceptance tests system — *Selenium*
 - Documenting and fixing reported bugs — *Trello, Nuclino, GitHub*
- May.20 - Jul.20 **Full Stack Developer (Full-time)** Stroulia Lab, University of Alberta
- Developing health science research related highly secure, scalable and user-friendly web and mobile applications — *React, Django, UI/UX*
 - Managing RDBMS for health science information — *PostgreSQL, MySQL*
 - Developing algorithms for Vibrant Mind games — *Search algorithms*
- Jan.20 - May.20 **Software Developer (Part-time)** Stroulia Lab, University of Alberta
- Developing and managing accessibility-related projects — *React, Django*
 - Redesigning user interface of existing projects to increase accessibility and maintainability index — *UI/UX*
 - Creating unit and functional tests including CI/CD systems for existing projects — *Unittest, Selenium, GitHub Actions*
- Sep.19 - Feb.21 **Teaching Assistant - Business Analytics (Part-time)** University of Alberta
- Helping out the primary instructor with grading
 - Facilitating students to improve the learning experience — *R, ML Algorithms*
- May.19 - Jan.20 **MRI Software Developer Intern (Full-time)** University of Alberta Hospital
- Developing algorithms for MRI image processing — *Non-Cartesian Convolution*
 - Creating a distributed system for parallel computation using multiple GPUs — *C, CUDA, Python, CuPy, Numpy, TensorFlow, ISMRMRD, H5Py, MatLab*
 - Redesigning existing multithreaded applications for better performance in different operating systems — *Linux, Windows, Python*
 - Improving tests for the new and existing projects — *C, Python, MatLab*
- May.19 - Apr.20 **Global Education Assistant (Part-time)** University of Alberta International
- Facilitating the Global Education Program Coordinator in promoting the GEP in the International House of the University of Alberta to create a vibrant and diverse international community
 - Planning events that promote inclusion and diversity
 - Facilitating the International Week events at the University of Alberta
 - Compiling and managing the I-House alumni database — *Python*

Education

- Sep.18 - May.20 **BSc. with Distinction in Computing Science** University of Alberta
- Specialization: Software Practice

Projects

- Jan.20 - Apr.20 **Tartan Home System** Software Quality, University of Alberta
- Improving the code quality and coverage for an existing smart home system, and setting up continuous integration and deployment as a test automation scheme
- Technologies: *A/B Testing, ACTS, CodeCov.io, Docker, GitHub Action, Java, JUnit5, Google Analytics, Python, Pit mutation testing, SpotBugs, SonarQube*
 - Development process: TDD, Iterative (Agile), In collaboration of three people
- Jan.20 - May.20 **PACSLAC-II** Stroulia Lab, University of Alberta
- Researchers of Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC) can accumulate pain-related research topics and patient-related information in a highly secure environment, where they can communicate with other researchers for the advancements of the pain-related science and provide better services to the patients
- Technologies: *CSS3, Django, HTML5, JavaScript, Python, React, PostgreSQL,*
 - URL: <https://pacslaciappcommunity.org/portal/app>