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EXPERIENCE

GSCMS Inc, Seoul, South Korea	Software Engineer	Feb 2017 - Dec 2018

- Create **task automation(dynamic-link library, C\#, .NET)** on Windows server with an open-source(selenium). The service reduced the time for the laborious task in the accounting department, which manually fetched bank statements of various online banking services, **from a few hours to a second, and released it to production.**
- Build the **test automation environment** in various Operating Systems (OS) on **VMware** for operational acceptance and regression testing in an exploratory approach. The corner, critical, and custom cases by analyzing error logs and defects from the beta users are considered. It **cut off the beta version error rate by 99%.**
- Create new UIs, modify legacy functions in Windows Apps and query statements for Oracle SQL, write the **documentation** for the creation, and modification that I made.
- Build a **responsive web page** with AngularJS to support several **dashboards** in order to monitor server health and enable controlling the on-Premises service on the local server remotely for on-call team members.

SKILL

PROFICIENT: **Python, MySQL** | FAMILIAR: Django, AWS, Git, Java, C#, JavaScript, HTML5, C/C++**,** Node.js, React, Spring, .NET Framework, Docker, VMware

PROJECT

- **Polls web app,** Create the web site that shows polls and vote in them and admin site provide the add, change, and delete polls. It contains how to handle the **route, models** in the Database, **automated testing**, **views** and templates, admin page conventions, **packaging** to deploy and **patching** with git. **[Python, Django Framework, Sqlite3]**
- **Covid Case Tracker**, Implemented a covid case tracker that pulls the number of new cases all over the world everyday from CDC website using a python script and plotted trend graph. Set up a scheduler to run the python script on EC2 using Step functions daily, use the plotted graph saved on S3 to display on WordPress website using AWS Lightsail. Implemented alarms on AWS Cloudwatch once the numbers increase significantly for a certain country. **[Python, AWS(EC2, S3, Step functions, CloudWatch, Lightsail)]**
- **Microservices on Spring,** Implemented the login service and the post service which is for CRUD of the post and communication each services via Eureka server **[Java, Spring framework, JPA, h2, HATEOAS, Netflix Eureka]**
- **Prouhet–Tarry–Escott problem on Message Passing Interface(MPI),** Implemented MPI parallel program parallelizing the operation between 16 threads on a computer cluster and compared the performance of $O(2^n)$ computation between on single laptop and cluster computers**[C, Message Passing Interface library]**
- **Compute Unified Device Architecture(CUDA) programming with shared memory,** Optimized the use of memory between threads on **parallel computing** to maximize the bandwidth. It avoids redundant transfers by loading and storing data in a coalesced pattern to shared memory from global memory. **[C++, CUDA Toolkit]**
- **Web App with React.js, Node.js,** Implemented CRUD table, role-based access control, session cookies on the front-end with Reactjs, encrypted password, REST architecture, test functions with Promise to manage asynchronous executions on the back-end with Nodejs. **[JavaScript, React, Node, NeDB, RESTful]**
- **Strategy Pattern implementation** Contains the abstract class which is HAS-A relation and the interface which is extended to concrete implementation classes. The objects for the client are assigned at runtime and it is tested based on equivalence classes in JUnit jupiter. **[Java, JUnit]**

EDUCATION

Cal State University East-bay, Hayward, CA	**M.S. in Computer Science**	Jan 2019 - May 2021
Samsung Multicampus, Seoul, South Korea	[NCS] Android Developer Course	May 2016 - Nov 2016
Sejong University, Seoul, South Korea	B.S in Electronic Engineering	Mar 2009 - Aug 2015