

ASHISH SHRESTHA [stylized Aasys Sresta]

SOFTWARE ENGINEER | COMPUTER ENGINEER

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Education

M.Sc. in Computer Science

B.Sc. in Computer Engineering (Dual Degree Program)

GPA: 3.48 Graduation - June 2018
Drexel University Philadelphia, PA

Experience

[Sift Security](#) Philadelphia, PA

Security Research Engineer March-September 2017

- ❖ Developed machine learning based algorithms for vulnerability and security incident detection for insider threat, time-based anomalies and user usage pattern
- ❖ Built integration with third-party services like CarbonBlack, ServiceNow, Splunk running on AWS EC2
- ❖ Created a Docker based framework for sandboxing execution of user-uploaded scripts

[Dell Boomi \(Master Data Management\)](#) Berwyn, PA

Software Development Engineer March-September 2016

- ❖ Developed various new features for MDM platform; some including smart collection storage, data filtering, mobile web application
- ❖ Self-made smart collection storage algorithm saved more than 60% storage space on average in test environment
- ❖ Experience with front-end and back-end development, responsive design, and database design
- ❖ Greenlighted development of recommendation system to aid users in integration process creation using cloud ML

[Dell Boomi \(AtomSphere Cloud Integration\)](#) Berwyn, PA

Software Development Engineer March-September 2015

- ❖ Developer for Dell Boomi AtomSphere cloud-based iPaaS
- ❖ Worked in a collaborative team composed of developers, QAs, UI/UX and product manager
- ❖ Involved in full stack development using Google Web Toolkit and Boomi's integration stack
- ❖ Implemented a compression upload algorithm for raw text that resulted in the reduction of upload time of 100GB+ file from few days to few hours
- ❖ Piloted UI testing automation with Selenium and Cucumber

[Retouch Lab \(Drexel University\)](#) Philadelphia, PA

Research Assistant June 2014- March 2015

- ❖ Developed a real-time 3D model rendering application to visualize accelerometers data for research on cutaneous vibration during whole hand haptic interactions.
- ❖ Worked with other RAs to design and fabricate a cable driven robot to be used in proprioception studies.
- ❖ Experience with motion capture systems, motor control, CAD and 3D printing.

Skills

Languages: C, C++, C#, Java, Python, Kotlin, Visual Basic, SQL, QBASIC, bash scripts | **Web:** HTML, CSS, JavaScript, Servlets, REST/SOAP, MQTT, JAX-RS, Google Web Toolkit, MVP/MVC | **Data and Simulation:** MATLAB & Simulink | **Functional:** Racket, Scala, Haskell | **Version Control:** git, svn | **Build tools:** make, maven, gradle | **Libraries:** .NET, OpenCV, OpenGL, CUDA, OpenMP, gem5 | **Cloud:** Google Cloud Platform, Amazon Web Services | **Packaging:** deb, rpm | **Database:** ELK stack, MySQL, PostgreSQL, Cassandra, Titan, Hibernate | **Embedded Systems:** Raspberry Pi, PSoC, Arduino, FPGA, Dragino | **Hardware dev tools:** VHDL, Xilinx ISE, Modelsim, PSoC Creator | **Others:** kafka, VMware ESXi, Jetty, Tomcat, Docker, Jenkins

Projects [\[more on http://aasys.io\]](http://aasys.io)

Seamless Compute Kotlin | JS | Java | Python | Scripts | ...

A personal project made in collaboration with three friends with the central idea of changing the personal computing landscape with a "cloud-backed" system. User can access their actual computer through a variety of "shell" devices (low powered I/O only devices) and additionally via the web browser. Some of my contributions are high-level distributed system design and architecture for cloud, full stack development, integration of virtualization engines, hardware design/development.

Hand Synergy Visualization OpenGL, C#, Data Visualization

Real-time 3D visualization application to visualize energy propagation for research on cutaneous vibration during whole hand haptic interactions.

Demo Video: <https://youtu.be/D1W8QI9un-E>

Smart Door Raspberry Pi | I2C | SPI | Python | C | IOT

Custom built hardware/software for door locking/unlocking mechanism with automatic identity verification; built using Raspberry pi, capacitive touch sensor, stepper motor, camera module and Bluetooth based proximity and verification. Demo Video: <https://youtu.be/A05R2BRYeI>

Amilo Bot C#/Python

Amilo Bot is a Discord Bot that I built for use in my personal Discord server. Some of the services it provides are multi-lingual announcer for voice channel activity, interact with users with chat bot framework, automated language translation services.

Next Gallery Java | HTML | CSS | JS

A prototype mobile web application for gallery visitors that provides location-based information and interactive content. Additionally, allows users to interact with static displays placed in the gallery. Demo Video: <https://youtu.be/l2pz00KuyK8>

Open Invite Android App | Java Server

An android application that allows users to post events on the map and allows people to find local events around them that they can attend.

Please visit my profile page at <http://aasys.io> for more information, projects, videos and code repositories