Ashwani K Bachchan

Seeking an innovative and challenging position in Software development to utilize my expertise in advanced software development methodologies as well as in deployment to the worldwide customers.

EXPERIENCE

Incedo, Gurugram —Senior Software Engineer

November 2021 – Present

KlocWork by Perforce:

Klocwork is a Static Analysis Tool for C, C++, Java, Python which allows to find coding defects in the enterprise applications.

Role and Responsibility:

- Working as an individual contributor on a static application security testing (SAST) tool from Perforce for C and C++ that identifies software security, quality, and reliability issues helping to enforce compliance with standards like CERT, CWE, OWASP, MISRA, AUTOSAR

- Developed new rules that help in finding potential defects in input source code written in C, C++ over command line or IDEs.

- Improve existing implementation to fix false positives and false negatives raised or missed by the product.

- Productize support of new compilers that the product can handle.

Skills: C, C++, Python

IDEMIA, Noida —Software Engineer

February 2019 – November 2021

Projects:

- **Confidential Computing:**
  Confidential computing is a cloud computing technology that isolates sensitive data in a protected CPU enclave during processing. The contents of the enclave — the data being processed, and the techniques that are used to process it — are accessible only to authorized programming code, and are invisible and unknowable to anything or anyone else, including the cloud provider.

Contact:

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TECHNICAL SKILLS

Languages:

C, C++, Rust, Objective-C, Swift, Java, Python, Algorithms, Data Structures, STL

Tools:

MS Visual Studio, Android Studio, Xcode, Git, Eclipse, CMake

Databases:

PostgreSQL

Frameworks and Other:

Linux, ReactJS, Android

INTERPERSONAL SKILLS

Leadership, Time Management, Team Management, Analytical Thinking, Teamwork, Flexibility, Quick Learner

EDUCATION

B. Tech - Computer Science and Engineering

August 2015 - June 2019

ITS Engineering College, Greater Noida

Percentage - 78.2%

Role and Responsibility:

Design and development of POC for Confidential Computing Face Match Algorithm using Intel SGX SDK and OpenEnclave to protect User Biometric Data as well as safeguarding it inside the Intel CPU Enclave while also allowing various operations on it like Enrollment and authentication.

Skills: C++, Rust, SQLite

Technology: Intel SGX

- **Verifiable Computing:**
  Verifiable Computing enables a system to offload the computation of some function, to other perhaps untrusted clients, while maintaining verifiable results. The other clients evaluate the functions and return the result with a proof that the computation was carried out correctly.

  Role and Responsibility:

  Design and development of Android and iOS SDK for computing biometric matching on the client device for privacy preservation and verifying the results on server using Verifiable Computing – Zero Knowledge Proof libraries (i.e libSNARK and Bellman) and circuit optimization of ZKP for faster running time on client device.

  Skills: C++, Rust, JNI, Java, Objective – C, Swift, Multi Thread

  Technology: Zero Knowledge Proof, iOS, Android

- **MobiFace:**
  MobiFace is an SDK for face recognition aimed at low cost devices having resource constraints on CPU processing and RAM which allows the app developer to leverage the Face Recognition technology to make payment and access to the device secure.

  Role and Responsibility:

  Implementing and integrating the Face Recognition SDK based on Idemia Proprietary Technology on a new platform based on Firefox OS used by KaiOS.

  Skills: C++, IPC / Binder, MakeFile, Multiprocessing

Senior Secondary – Science

April 2014 - March 2015

Sun Valley International School, Ghaziabad

Percentage – 89%

High School

April 2012 - March 2013

Sun Valley International School, Ghaziabad

CGPA: 9.6

AWARDS

Second Rank in Quiz on C held in ABES College

Advanced to the final round of Microsoft "The Last Slice Game" winning IoT Kit

Lead a team in Smart India Hackathon 2018

CERTIFICATIONS

Successful Completion of Udemy JSP and Servlet Course

Attended Workshop on Skill Development by RuralShores

Hackveda ITS Certified ChatBot Enthusiast of Course ChatBot

Successfully completed NPTEL course on Operating System

LANGUAGES

English, Hindi

Technology: KaiOS, Machine Learning, Inter Process Communication

- **F-CODE:**
  F-Code is a next-gen Smart Card which authorizes payment using Fingerprint. F-Code along with the Android App can be used in any Financial institutions and provide a highly secure mode of payment.

  Role and Responsibility:

  Developed a module to capture the F-Code Android App crash and any exception that occurs during the usage and operation of F-Code Smart card and logs the reason in the file for investigation and fixing of bugs to increase the reliability and ensure quality working of the F-Code System.

  Skills: Java

  Technology: Android, F-CODE

SYSCOM (IDEMIA), Noida — Software Trainee

August 2018 - February 2019

Smart Card OS

Smart Card OS is aimed to run on embedded devices and run various applets on it.

Role and Responsibility:

Implemented the Security Attributes (Access Rights) modules for Security of Elementary files and Dedicated files present in the Smart Card to ensure only allowed users and systems to access it.

Fixed bugs in the Java Card module of the Smart Card System to ensure reliability of applets and increase performance.

Gain Understanding of Document TS 102 – 221, TS 102 – 222, ISO/IEC 7816

Skills: C, Java