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| Vibhor Agarwal | | | | | | | | | |
|  | CLOUD & AI ARCHITECT | | | | | | | |  |
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| (91) 96204 42842 [vibhor75.agarwal@gmail.com](mailto:vibhor75.agarwal@gmail.com) | | | | | | | | | |
| Bengaluru (South), India, 560 068 [LinkedIn Profile](https://www.linkedin.com/in/vibhoragarwaltechfree/) | | | | | | | | | |
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| **professional summary** | | |  | |  |  | **education** |  | | |
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| **Vibhor** has about 22 years IT experience and currently works as **Cloud & AI Architect** (primary: new & emerging technologies), having broad experience on several business & technology domains. His expertise covers an array of open-source and commercial tools & technologies, including Cloud, DevSecOps, Automation, Java/J2EE, Python, React/Angular, Mobility, Middleware, and BI/Data Analytics. He has been involved in product development, prototyping/research, digital transformation, application modernization, portfolio rationalization, and business process automation and optimization.  Vibhor is hands on technologist and expert in architecting, designing, building & enhancing complex products & applications throughout their lifecycle.  Responsibilities also include leading & participating in COEs/COPs, customer presentations, recruitments, proposals & RFPs, POCs & POVs, solution support & assistance to engagements across BUs. | | | | |  |  | **MBA**  Pune University  **BE**  Bhopal University  **Secondary & Higher Secondary**  CBSE | | | |
| **experience summary** | |  | | | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Duration** | **Organization** | **Designation** |  |  |  | | Jul 2003 - Present | [CGI Inc.](https://www.cgi.com/en) | Director Consulting (Expert) |  |  |  | | Jun 2002 - Jul 2003 | [Automated Workflow Private Limited](https://www.linkedin.com/company/automated-workflow-private-limited/)  (Now - [Azentio](https://www.azentio.com/azentio-software-acquires-candela-labs/), [Candela Labs](https://www.candelalabs.io/timeline/)) | Development Specialist |  |  |  | | Nov 2000 - Feb 2002 | [Tata Infotech Ltd (TIL)](https://www.tcs.com/)  (Now Tata Consultancy Services) | Trainee, Development Engineer |  |  |  | | | | | | | | | | |
| **assignments** | |  | | | | | | | |
| **AI Enablement** | SKF | Dec 2023 – till date | Cloud & AI Architect, DevSecOps  Some of the initiatives within this group include Big Data processing workflow & service on AWS, integration of micro services using LLM tool former using Azure OpenAI & AWS, Knowledge Retrieval system built on Azure, proprietary products using data science hosted on AWS with React front end.  *Technical Environment*: Python, LangChain, data science services, React, Azure OpenAI (GPT 3.5), Azure AI Search, Azure Blob, Azure Functions, AWS (ECS, Athena, Lambda, Step Functions, S3), AWS CDK, Serverless, Azure DevOps  **Calculation Services on Cloud** | SKF | July 2020 – Dec 2023 | Cloud Architect, DevSecOps  For a large bearing manufacturer, the proprietary calculation applications developed in C/C++/others are required to be hosted as a service on cloud. Scope involves building front end APIs to the calculation logic, end-to-end CI/CD pipeline to host containerized applications on AWS serverless (ECS, Lambda) in a secure, cost optimized, performing, fast auto-scaling & robust architecture.  *Technical Environment*: Python, Locust, AWS, AWS CDK, Serverless, Jenkins, Azure DevOps, Customer proprietary software  **CMS with Adobe Experience Manager (AEM)** | Signify | July 2022 – Aug 2022 | CMS Consultant  Leverage past CMS experience to review deliveries at high level for a large Dutch lighting corporation that requires enhancement and development of AEM based front end applications in this engagement.  *Technical**Environment*: Adobe AEM, Java, Vue.js, Typescript | | | | | | | | | |
| **BI Reporting Optimization** | Equipment & Controls Inc.| Apr 2020 – Jul 2020 | BI Consultant  For a US based industrial automation company, the existing BI & Reporting set-up be assessed in terms of streamlining reporting, identifying correct data sets, report consolidation, migration to latest reporting technology, along with building a centralized BI/Reporting repository.  *Technical Environment***:** IFS ERP, Oracle, Crystal Reports  **FRS Mobile Infrastructure** | Otis Worldwide | Mar 2020 – Apr 2020 | Architect, System Configurator, Consultant  For a large US based elevator manufacturer, the infrastructure solution required implementing a set of software components including Akamai for WAF, F5 for load balancing access to back-end application servers via proxy servers to achieve a multi-tier architecture. Additionally, it needed end to end SSL pass-through to support client certificate based mutual authentication on existing back-end application servers.  *Technical Environment*: Akamai, RHEL, F5, HTTPD, HA Proxy/ Nginx, CGI DC  **Digital Payment** | NXP Semiconductors | Jun 2018 – Feb 2020 | Architect, Lead Developer  An end-to-end solution integrating several advanced technologies & comprehensive software & hardware integration support, to offer OEMs a pre-certified and validated turnkey solution, that included a wallet application and SDK, wallet server integrated with MDES & VTS tokenization platforms, SEMS (Secure Element Management Service Aka Loader Service), NFC and SE module, NFC middleware, SE Java Card™ OS, and the required SE applets. In other words, the platform is an enabler for users, to digitize their payment card onto their phones, wearable or any IoT device. The extended scope included building a state of art simulation product in the digital payment domain, overriding yet fulfilling critical system dependencies.  *Technical Environment*: Java, Spring Boot RESTful services, JPA / Querydsl, OAUTH/OpenID, Gluu, Redis, HSM, PostgreSQL, Docker, Maven, ELK, Mockito, Firebase, Android, iOS, Rest Assured, JSP, Angular 7 with Material Design, Bit bucket, JIRA, Bamboo, Coverity, Black Duck, Confluence, AppDynamics, AWS, Customer DC  **IoT Hub** | NXP Semiconductors | Aug 2018 –Sep 2018 | Back End Architect, Consultant  A platform that provides partners who build their own IoT systems, to provision the certificates, keys, and services on device and to manage associations with devices, and the device state transitions. Scope of work included preliminary design and a prototype.  *Technical Environment*: Spring Boot Micro Services, SE, NXP Proprietary Middleware, Android, Customer DC | | | | | | | | | |
| **Productization of PA Services** | NXP Semiconductors | May 2017 – Jul 2018 | Consultant, Architect  Product Authorization Services (PAS), a .NET based platform, allows end users to use their NFC enabled phones to tap on the products with embedded NFC tag, to view product content on mobile's browser. Scope of work included security & performance testing, hosting redirection component with the admin portal on AWS, and implementing several system enhancements, followed by app and infra support.  *Technical Environment*: ASP.NET MVC, ASP.NET Web API 2, MSSQL, REST APIs, Dapper ORM, NuGet Package Manager, NUnit 3, Visual Studio 2012 with C# compiler, OAUTH2 for user authentication, HSM (UTIMACO SE 1500, UTIMACO SE1000), Node.js, Bower, GULP, Selenium Web Driver, AWS  **Digital Identity & Access Management** | NXP Semiconductors | Sep 2017 – Apr 2018 | Sr. Architect, Lead Developer  This product is a comprehensive mobile service-based solution which brings Relying Parties and Identity Providers together, enabling end users to authenticate onto Relying Party apps/applications - with their original digital identity (such as travel documents, DL, passport, other root electronic documents) or its derived identity. The authentication token in the form of JWT contains claims extracted from card or the chip, enabling authorization decisions for Relying Parties. In terms of end customers, public and private service providers benefit from a secure OpenID based back-end system that offers online identity, authentication, and signature solutions to citizens. Scope of work included building a prototype for business with major use cases that can be taken to government agencies in and across Europe.  *Technical Environment*: Java 8, Spring Boot 2 RESTful micro services, Gradle, EJBCA, Web Socket, Cloud Foundry UAA, Redis, Rabbit MQ, Docker, Vagrant, PostgreSQL, ELK, jQuery, Mockito, Android, iOS, Appium, Soap UI, GIT, JIRA, Bamboo, Confluence, AWS with Dockers, Customer DC  **AppXplorer Productization** | NXP Semiconductors | Dec 2016 – Mar 2018 | Sr. Architect, DevOps Consultant  A smart city product, the platform is an *'ecosystem of cloud and NFC mobile services, designed to manage the content of smart cards with end users'*. A special chip within the smart card, with its inbuilt security features, can be leveraged for multitude of use cases. This platform also provides a web portal to on-board and link application providers and card issuers, along with card & application metadata creation. The back end component of the platform talks to android application to read the card status, install/delete applications on the card, via an android application acting as card interface and also as a proxy for card commands (APDUs) The scope includes product and platform performance and security testing and hosting on a public cloud, with BAU setup.   *Technical Environment*: Java 8, Guice, Angular 6, Material Design, Web Socket, Node.js, Tomcat, MS SQL Server, Mifare SDK APIs (proprietary), JAX RS REST, Hibernate, Liquibase, Google Prototype Buffer, Bit bucket, Bamboo. *Hosting Environment*: Azure (legacy), AWS (with Cloud HSM, Direct Connect, RDS, Classic and Application Load Balancers, Auto scaling, EC2, Code Pipeline, S3, and SDK), JMeter, Commercial Penetration Test tools | | | | | | | | | |
| **Quality of Life** | Sodexo | July 2017 – Oct 2017 | Consultant  QOL is a multi-segment consumer facing web application integrating access to functions such as concierge, menu’s & nutrition, facility management. Scope of work involves feasibility analysis for - Azure migration & building QOL mobile app leveraging existing back end QOL web application.  *Technical Environment*: ReactJS, Node.js, Cloud AMQP, Redis, Seneca, Auth0, IBM Maximo, Customer APIs – Byte & Concierge, Oracle, AWS Heroku, S3  **WordPress Migration to Azure from AWS** | Sodexo | July 2017 – Sep 2017 | Consultant  [Mindful](https://www.mindful.sodexo.com/) & [InMyKitchen](https://loveoffood.sodexo.com/) are word press sites hosted on AWS infrastructure. The migration is from AWS to Azure.  *Technical Environment*: LAMP, WordPress (PHP), Apache HTTP Server, AWS, Azure, Customer DC  **Content & Services Transformation** | TomTom | July 2020 – Present | Sr. Architect  The project was about transforming delivery of Content & Services for the navigation devices, for a global leader in navigation, traffic and map products, GPS sport watches and fleet management solutions. The two agile teams (MapShop and NPI) working in tandem were responsible for content releases for maps, introduction of new devices, speed camera products, promotions etc., along with maintenance of the complete streams. Scope included improving & optimizing the content release delivery cycle (target quarterly bulk maps release cycle to monthly), automating all manual tasks close to 100%, improving release cycle time, and process streamlining along with multiple enhancements to optimize key business processes  *Technical Environment*: Java 1.7, Ruby 1,8, Web Services (RESTful), Spring, Spring Security, Intershop Ecommerce 7, Tridion 2010/2013, Maven, Linux, MySQL, Ranorex for device test automation, Tomcat, Apache HTTP Server, JIRA Agile, Eclipse, Jenkins, Windows Scripting, Stash, GWT desktop apps.  **CMS Migration for Entegra Procurement Services** | Sodexo | Jan 2015 – Dec 2015 | Sr. Developer, Architect, QA  [EntegraPS](https://www.entegraps.com/sites/eps-us/home.html) was built on CMS - Tridion 11, provided content about procurement services for multi-unit clients. The project involved revamping & re-engineering the portal, functionally as well visually, leveraging a new open-source CMS / a web application development tool - Jahia. Several new components were developed for editors and a new site was built, using a brand-new responsive UI, and included features such as 'You May.', Tag Cloud, Blog, Feedback. The core content was migrated from Tridion. Scope included automation of Jahia pages using Selenium Web Driver.  As a corporate strategy, the second aspect of the project was SSO integration of the tomcat applications, including Jahia based web application using .NET SOAP authentication and authorization services with custom IDP using SAML.  *Technical Environment*: Java 1.7, Ruby 1,8, Web Services (RESTful), Spring, Spring Security, Intershop Ecommerce 7, Tridion 2010/2013, Maven, Linux, MySQL, Ranorex, Tomcat, Apache HTTP Server, JIRA Agile, Eclipse, Jenkins, Windows Scripting, Stash, GWT desktop apps.  **Oracle EBS Customization** | Industrial Scientific Corp. | Oct 2014 – Dec 2014 | Developer, Tester, Training  A leading American gas detection company, develops, manufactures, and services fixed and portable gas detection equipment. The business leverages Oracle E-Business Suite, 12.1.3. The assignment involved customization and enhancement of few OOTB modules - BOM (Bill of Materials), Supplier MDM Workflow, Supplier Registration and customized workflow dashboard using Oracle Applications Framework (OAF) for front end, PL/SQL and integration with standard product APIs.  *Technical Environment*: Java 1.6, Oracle OAF 12.1.3, JDeveloper 10.1.3.3.0, Oracle Database 11.2.0.3.0, Oracle Application Server 10.1.3.5.0, Linux 2.6.32  **Nimbus 360, Inhouse Cloud Product** | CGI Inc. |Jul 2014 – Oct 2014 | Sr. Developer, Architect  The product is part of a large CGI IP Unify360, under Cloud migration suite of products, and this dealt with building a generic cloud migration assessment solution clubbed together with an application assessment tool. Generic SaaS RESTful web services such as Caching, Storage, Authentication and Security were built to support application migration to an open-source Cloud infrastructure (PaaS). Project was executed in an agile manner where components are being built and taken through selected clients in their beta version for early feedback, and then subsequently enhanced iteratively.  *Technical Environment*: Java (1.6), Apache CXF 3, Eclipse JDT (plugins), Apache Tomcat 7, Redis, Jasper Reports 5, JOSS, Log Stash, Maven 3, SVN  **Portfolio Rationalization** | Livingston International| Oct 2012 – May 2014 | Architect, Tech Lead, Sr. Developer  A top North America based Customs Brokerage & Compliance Company, hoisted a suite of applications called ‘Trade Sphere’ with a mix of dedicated and shared application instances (such as Importer, Exporter, Restricted Party Screening, Solicitation Tracker, Regional Customs Manager) with multiple, overlapping, and duplicated code versions, redundant application servers, middleware and databases - in terms of both technology stack and business functions.  The scope of this project called Simplification was to standardize, streamline and rationalize all applications on a single & upgraded version of code base & involved extensive application merging and decommissioning by introducing multi-tenancy, optimizing middle-ware transaction processing as well as update to the latest version of supported application software, databases & other application components. The SOW included migration of existing applications from Windows to Linux (on CGI DC with minor architectural changes), from Web Sphere X to Tomcat 7, along with technological upgrades such as upgrades to JDK 1.7, IE9 compatibility and Oracle 11g upgrades & multiple iterative optimizations. Additionally, critical components were later deployed on public cloud as a POC, in a managed services model, to be able to leverage cloud features.  *Technical Environment*: Java 1.7, IBM MQ, Apache HTTP Web Server 2.2, Apache Tomcat 7, SmarteLink (Customer Proprietary framework) with web services, Crystal Reports 10, Linux, AWS (POC), Oracle 11g, XML, Hudson (Build and Deployment), Maven 3, SQL, JSP/HTML, Crystal Reports 10, Java Script, and SVN.  **GlobalPrime Web Portal** | Deutsche Bank |Feb 2005 – Sep 2012 | Sr. Developer, Tech Lead, Support Specialist  The portal is used by hedge funds and institutional investors primarily based out of US, UK & Asia. Was involved in migration to BEA's Web Logic Portal 10.3., SOA implementation, user customization and personalization, user behaviour tracking, new Look & Feel, IE 7/8/9 and Fire Fox support, building Jasper reports, AJAX/FLEX implementation, back end services built & optimization, and several other enhanced client services. The primary module, Reporting (user interface for data warehouse reports) was transformed to use FLEX, optimized stored procedures and report generation using Jasper. The new framework allowed the integration of federated content from other parts of the bank as well as external contributors and the creation of specific silo sites or wider blended audiences.  *Technical Environment*: Web Logic Portal, Portal RESTful APIs, J2EE, Web Services – SOAP, Hessian, REST, Java Mail, XML, JMS, Java Page Flow, Spring, Hibernate, Lucene, Jasper Reports 5, AJAX using Ext JS, Tibco GI, Flex, Java Script, SOA, Jakarta-Commons projects, Cruise Control/Hudson, Maven, Ant, Log4j, Oracle 10g with TOAD, Sybase, Windows and UNIX, Web Logic 8.1+, 9.2 and 10 as Application and Portal server, Eclipse/Web Logic workshop, Liferay Portal 6 analysis - Entitlements POC, JIRA, Collabnet Tracking System, CVS, SVN, QTP.  **Virtual Web Store Modernization** | Bell Canada |May 2004 – Jun 2005 | Sr. Developer, Tester  The project involved modernization and re-engineering of an existing virtual store for a telecom giant, with 8.1 Commerce Server APIs. This included deploying the new virtual store, on a new infrastructure. The application framework and the new architecture was based primarily on a new presentation layer built on top of Web logic Page flows, a generic portal framework and a new optimized & expanded validation framework.  *Technical Environment*: Web logic 8.1, Oracle 8, TOAD, Eclipse, IE, Netscape 7 and Mercury Test Director.  **Banking Teller App Migration** | TD Bank |Aug 2003 – Apr 2004 | Sr. Developer, Tester  This assignment was a conversion project from C++ to Java, built for a large Canadian bank, for a retail banking application called S3 - a front-end transaction-processing system. Though the application was not a complete transaction processor but provided a desktop-based user interface and supporting functions for transactions that were, for the most part, processed elsewhere. Transformation included features such as local processing and introducing an improved user interface, which would lead to productivity improvement by more than 50%, by accommodating features such local journaling, querying capabilities, and facilitating stand-in processing.  *Technical Environment*: Core Java, Java Swings, JTest, C++  **IDMR** | [Temasek Polytechnic](https://www.tp.edu.sg/eae/)| Jul 2002 – Jul 2003 | Developer, Tester  The Integrated Digital Media Repository, IDMR is based on a distributed architecture, and comprising of multiple content repositories, primary being IBM Content Manager. IBM EIP (with IBM WAS) was used for web enablement of IBM Content Manager. IBM Video Charger maintained audio/video digital media and streamed these objects to users over web interface. Functions such as administration, uploading, searching and retrieval of documents and other media objects could be done via a customized web interface. Indexing and Quality Checking workflow was built on the web so that only selected files can be uploaded. Other prominent features of the system included SSO to other content repositories of the organization, tree structure of result list which could be zoomed, audit trail of the system transaction workflow, digital watermarking, and workflow for uploading and indexing the objects, saving, printing and emailing the result list, online help, and access control.  *Technical Environment*: Java, Servlets, JSP, Java Beans, XML, HTML, Java Script, DB2 7.1, IBM Content Manager 8.1, IBM EIP 7.1, Video Charger 7.1, Web sphere 4.0  **Intelli.Capture (**[Dotsphere](https://www.candelalabs.io/timeline/)**)** | Kotak Mahindra|Apr 2002 – Jun 2002 | Developer, Tester  Intelli.Capture - a production grade document capturing product allowed ‘capture’ of huge volume of documents and was implemented with a rich set of features such as scanning, image clean-up, quality checking, indexing, index verification, and release to a production imaging system. The solution was also loaded with features such as work distribution and load balancing.  *Technical Environment*: WinNT, IBM CM 6.1, PostgreSQL 7, VB 6.0  **KLIO** | [Paramis, France](https://www.societe.com/societe/paramis-france-421846940.html) **|** Apr 2002 – Jun 2002 | Developer  The assignment involved development of a ‘pure’ web-based ERP product. This customized product was meant to be BPM tool for small & medium scale manufacturing organizations, and at the same time, comparable with ERP products such as SAP and Invensys. The product was named KLIO & was designed to be modular. Each sub module had CRUD of the corresponding entities after the validations performed based on the business logic.  *Technical Environment*: Java Servlets, HTML, and JavaScript, IBM Web Sphere App server, IBM Visual Age 3.5, WinNT, PVCS, SQL Server 7.0 | | | | | | | | | |
| |  |  | | --- | --- | | **certifications** |  | | | | | | | | | | |
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| * [**AWS** Certified Solutions Architect – Associate](https://www.credly.com/badges/b0bbb2e1-2c1d-4c59-b300-9b3ac947bd24?source=linked_in_profile) | | | | * [**Oracle** Cloud Infrastructure 2021 Certified Architect Associate](https://storage.googleapis.com/vibhor_certs/oci_architect_associate.pdf) | | | | | |
| * [Microsoft Certified **Azure** Fundamentals](https://storage.googleapis.com/vibhor_certs/Microsoft_Certified_Professional_Certificate_2.pdf) | | | | * [**Google** Cloud Certified Cloud Digital Leader](https://www.credential.net/1c5d5f38-16df-4ec8-80cc-65625f1f16a4?key=edf736097ed1ec21985100f6e7b40829b8e830fbad37953c0114686561b223a6) | | | | | |  |
| * [HashiCorp Certified: **Terraform** Associate](https://www.credly.com/badges/df9cf821-9aea-4db0-8202-bb4852322e19?source=linked_in_profile) | | | | * [Google Cloud Skills](https://www.qwiklabs.com/public_profiles/b4677372-95d9-4b8a-bf33-3503e5c157be) | | | | | |  |
| * [AWS **Partner**: Accreditations](https://www.credly.com/badges/60024a5d-e161-4554-98e0-feff0100fab1/linked_in_profile) | | | | * [**Aviatrix** Certified Multi-Cloud Networking Associate](https://storage.googleapis.com/vibhor_certs/ACE_AviatrciCert.pdf) | | | | | |  |
| * [Microsoft Certified Azure **AI** Fundamentals](https://storage.googleapis.com/vibhor_certs/Microsoft_Certified_Professional_Certificate_1.pdf) | | | | * [Microsoft Certified Azure **Data** Fundamentals](https://storage.googleapis.com/vibhor_certs/Microsoft_Certified_Professional_Certificate_0.pdf) | | | | | |  |
| * [Oracle Certified Foundations Associate](https://storage.cloud.google.com/vibhor_certs/oci_basic_cert.pdf) | | | | * [**Python** for Data Science](https://www.credly.com/badges/2f111a98-ec86-4a8b-aead-4d241bd41574?source=linked_in_profile) | | | | | |  |
| * [Certified **SAFe**® 5 Practitioner](https://www.credly.com/badges/c2fb06d0-6229-4bde-a260-07f0395c9d41?source=linked_in_profile) | | | | * [Certified SAFe 5 Agilist](https://storage.googleapis.com/public_vibhor/Safe5agilist.pdf) | | | | | |  |

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| |  |  | | --- | --- | | **Others** |  | | |
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| * Blogs/Papers: * Tech Community: <https://stackoverflow.com/users/7746398/techfree> * https://github.com/vibhoragarwal * Training - WebLogic, MongoDB, Intershop, Talend, Liferay, Jahia, Angular, AI/ML, Data Science, Design Thinking |
| * Industry Experience – Manufacturing, Banking, Telecom, Retail & Consumer Services, Digital Payment |
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