**Palindromes in all Protein Sequences (PPS):**

A palindrome is a word or a phrase which reads the same in both directions and are found in DNA, RNA and protein sequences of both prokaryotes and eukaryotes. Until now, very little effort has been made to identify palindromes in protein sequences and hence to this end, a non-commercial database, Palindrome in Protein Sequences Database (PPS-DB) has been developed to search Palindromic repeats in protein sequences. The database also facilitates in identifying the Palindromic repeats in various sequence databases like GDB, PIR, SWISS­PROT and PDB. Further, Jmol has been incorporated, to visualize the palindromes in three-dimension (If present in PDB structures)

Url: http://bioserver1.physics.iisc.ernet.in/pps/(OFFLINE)

**Role and Responsibilities:**

* Developing Perl Scripts for downloading the genome and PDB files from the NCBI FTP SERVER.
* Database design and implementation.
* Developing Perl Scripts for weekly updating the genome files into database.
* Creating IP address/Location tracker Script using JavaScript.
* Creating Shell Script for log analyzes and modifications.
* Understanding the functional requirements from Government.
* Trouble Shooting/Bug fixing.
* Designing and Coding of web page using CSS and HTML.

**Hydrogen Bonds in Macromolecular Structures Database (HBMS):** Hydrogen Bonds in Macromolecular Structures (HBMS) is a non-commercial database developed to identify the hydrogen bond interactions for all the macromolecular structures available in Protein Data Bank (PDB) archive. The database calculates the hydrogen bond distance along with its Diffraction Precision Index (DPI) and the bond angle values. In addition, the three-dimensional view of the hydrogen bond interactions can be viewed using Jmol interfaced with the database.

Url: http://bioserver1.physics.iisc.ernet.in/hbms/(OFFLINE)

**Role and Responsibilities:**

* Developed Perl for Weekly Updating of PDB flat/binary files into database
* Pymol Displaying result as 3D Structure.
* Understanding the Functional Requirements from Government/Team members.
* Trouble Shooting/Bug fixing.
* Designing and coding of web page using CSS and HTML.
* Creating Jmol Script to calculate Atom structures.

**IBM-[Perl Regular Expression –Application Developer]**

**Non Domestic Transferred Projects:**

**1. PIPIS to ATAS2 [Personal Independence Payment Information System] to [Audit Trail Analysis System 2]**

Client:CapGemini

Duration: Dec 2014 - Feb 2015

Project Location/Mode:UK Government/Highly Secured.

Project Site:UK.

Role: *Application Developer*

Team Size:5

Skill Used:Perl, Python, PLSQL, Bash shell

Protocols: Pesit, TLS, SSL

Role Description: Regex Application Developer

**Project Details:** *Ax way Synchrony Framework is the Electronic interface Creation and Transferring System, Which works under Linux/Unix/Windows Platforms. Based on Client Requirement the Regular Expression Language will be Keep on changing, like that Data format and Files also will get change. Axway Supported Languages: Perl,Python,java,ruby,Scala,Hushkell,bash. Regex is the Heart of the Project. In this Project we used Python as the Client sender format Language and Perl was IBM India chosen Language, Because for Applet based file analysis and binary file analyzes Perl was used. In PL/SQL databases need to populate all formats of data file, Date, Time everything as client Mentioned. Based on this entry, we will start Services, Automation and script works. We are using Pesit Protocol for Transferring the Data and TLS, SSL Protocols are used to Provide the Secure Login credentials/Validations for the application to Reach Securely. Behind this process We Need to Prepare Excel sheet and Documents Creation and need to wait to verify it from App Manager so this process would take time. After the Success we can Relax Max Time because non domestic projects will happen twice in a Year. So in between if any Bugs was raised I will fix that script via IBM Tivoli incident Analyzer.*

**2. FRAIMS to ATAS2 [Fraud Referral and intervention Management System to Audit Trail Analysis System ]**

Client:HP

Duration:Feb 2015 - Mar 2015

Project Location/Mode:UK Government / Highly Secured

Project Site:UK

Role: *Application Developer*

Team Size:5

Skill Used:Perl, Python, PLSQL, Bash shell

Protocols: Pesit, TLS, SSL

Role Description: Application Developer

**Project Details**: *Ax way Synchrony Framework is the Electronic interface Creation and Transferring System, Which works under Linux/Unix/Windows Platforms. Based on Client Requirement the Regular Expression Language will be Keep on changing, like that Data format and Files also will get change. Axway Supported Languages: Perl,Python,java,ruby,Scala,Hushkell,bash. Regex is the Heart of the Project. In this Project we used Python as the Client sender format Language and Perl was IBM India chosen Language, Because for Applet based file analysis and binary file analyzes Perl was used. In PL/SQL databases need to populate all formats of data file, Date, Time everything as client Mentioned. Based on this entry, we will start Services, Automation and script works. We are using Pesit Protocol for Transferring the Data and TLS, SSL Protocols are used to Provide the Secure Login credentials/Validations for the application to Reach Securely. Behind this process We Need to Prepare Excel sheet and Documents Creation and need to wait to verify it from App Manager so this process would take time. After the Success we can Relax Max Time because non domestic projects will happen twice in a Year. So in between if any Bugs was raised I will fix that script via IBM Tivoli incident Analyzer.*

**Kodiak Networks India Private Limited.**

Senior Perl Developer with F5 Networks: Bug Fixing, Basic Level of Tcl IRule Writing, Networking Virtual server Template creation and adding it to F5 Virtual server for transmitting Multimedia messages via SIP and VoIP Protocols and able to deliver SOAP Messages to client for new service activation using Restful Web API Automation using Perl Scripts.

* Client Traffic Management and Basic intermediate level of f5 networking firewall management schema.
* Tool-Management: [Element Management System] Able to monitor the performance of F5 Networks virtual server status and Database enabled services and VoIP, SIP protocol status via EMS Tool and analyzing the logs files and debugging the Docker and Non Docker operating Systems.
* Docker/Non-Docker:Creating/Settingthe json/ini/dat/conf files for the New Kodiak services of Docker and Non Docker operating systems under Linux Environment.
* Able to filter and disconnect the connection from unwanted malware ip and unknown hacker ip-address using F5 Gateway.
* Kodiak Migration Scripts: DB Data Migration/Service Scripts Based on Client Requirement.
* Kodiak Database Validation Scripts.
* Updating/Parsing Scripts: Request and requirement of xml and Excel Sheets data are used to parse and update into DB and enable the service using the Perl Standard Modules and Bash Wrapper script.
* Service-Scripts: NuoDB/RabbitMQ/CouchBase Database container service scripts.
* Subversion-SVN, scripts check-in and workaround proving for the New Build release and for the issue of bug fixing.

**Authorship of Perl CPAN MODULEs:**

* Make search in **Google** the name of “kaavannan”. Find the below listed Perl modules from CPAN sites.
* Errstatus-ErrStat

**To Verify:** [*http://search.cpan.org/~kaavannan/Errstatus-ErrStat/*](http://search.cpan.org/~kaavannan/Errstatus-ErrStat/)

* DB::NuoDB.

**To Verify:** [*http://search.cpan.org/~kaavannan/NuoDBMonitor/*](http://search.cpan.org/~kaavannan/NuoDBMonitor/)

* Timten-AgentParser.

**To Verify:** [*http://search.cpan.org/~kaavannan/Timten-AgentParser/*](http://search.cpan.org/~kaavannan/Timten-AgentParser/)

**Aricent Technologies India Private Limited.**

[**HADOOP- Customer Experience Management on Demand**]

have created Cloudera API module from Hadoop Platform engine using Perl [updateClouderaXML] which will populate the Hadoop apache cloudera portal services.

have created Hadoop platform cluster installation/configuration modules using Perl script, got appreciation from Team.[install\_ngdb/ngdb\_installation]

have created cemod Upgrade Module for AA Analytics Team.[upgradecemod/validate disk]

Ability to build/modify/create RPM Package using Jenkins or using shell script by manually [post-install/pre-install] configuration.

Ability to do Data loading/Kerberos Configuration/Hive Query management/Hadoop Cluster Commands/Portal configuration/service management/Have written Robot Test cases/Setting OS security vulnerability script.

have created and Automated the Test cases using ROBOT Framework.

Ability to do Linux server hardening.

Rising/solving the Ticket using Jira.

Development under Scrum Methodologies

Experience with openstack/HDFS cloud computing.

Experience with anisible and /JIRA/Jenkins/nagios/

Experience with Virtualization (compute,storage,network)-KVM,

Experience with SOAP/RESTful/AWS API using perl/python,

Experience with NFV/SDN.

Experience with Docker containers and cloud deployment,

Strong experience with Linux at the system level, Familiarity with linux packaging tools like RPM,deb

Experience with Agile/Scrum/

Experience with messaging Protocols RabbitMQ/ActiveMQ

Experience with Fisheye crucible code Review,

Experience with IP/MPLS packet forwarding concepts, Experience with AWS cloud, EC2, Route53, S3, RDS, EBS

**Online Pre-written Test:** This interface Provides the SERC pre-Written Test, based on this IISC internship student and their skills will be informed to Developer Team, and this Result reflect, to their next round of interview and their projects with our lab.

***To Verify: http://bioserver1.physics.iisc.ernet.in/Exon/(OFFLINE)***