



Pennymac Technology Internship Information Session

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February 22nd, 2023

▼ Agenda

1. Welcome & Purpose of Session
2. Company Overview
3. Technology Departments
4. Next Steps

Company Overview

Topics: Company History, Company Culture, Locations

Fast-Growing, Innovative Company



- **Disciplined growth to address the demands of the GSEs, Agencies, regulators and our financing partners**
 - Since inception, PennyMac has focused on building and testing processes and systems before adding significant transaction volumes
- **Highly experienced management team has created a robust corporate governance system centered on compliance, risk management and quality control**

⁽¹⁾ All figures are for PFSI and include volume fulfilled or subserviced for PMT

More Than a Mortgage Lender

Key Stats



Top 2

Lender in the U.S.*



\$473 billion+

In Loans Serviced**



2 Million+

Happy Homeowners



\$197 billion+

Funded in 2020



#2

In Government Loans***

*Based on results from Inside Mortgage Finance Q2 6/30/21. Includes PMT loan acquisitions, for which PFSI earns a fulfillment fee upon loan funding.

**According to Inside Mortgage Finance ranking of Top 50 Mortgage Servicing Participants by dollar amount for Q2 2021.

***According to Inside FHA/VA Lending Top 50 Ginnie Mae Issuers by dollar amount as of 9/30/2020.

Core Values

Accountable

Doing right and continuously driving excellence through responsible performance, innovation, risk management and active measurement.

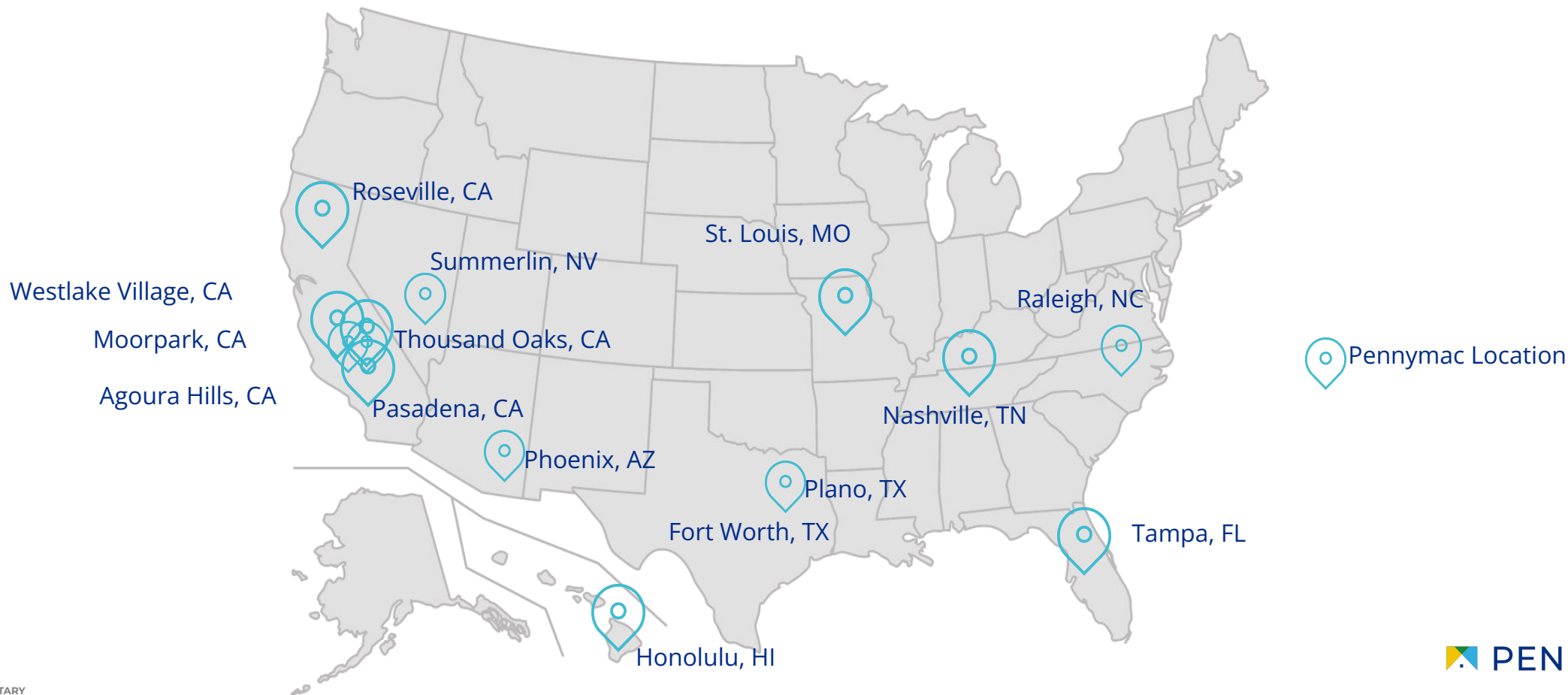
Reliable

Working together and committing ourselves fully to exceed customer expectations by operating with efficiency, expertise and dependability.

Ethical

Behaving with honesty, fairness and integrity to build the utmost trust among each other and everyone we serve.

Pennymac is a National Player





Technology Internship Overview & Departments

Topics: Learn about the overview of the internships and each department within the IT Internship Program

Internship Logistics & Details

| Topic | Details |
|----------------------|---|
| Duration | <ul style="list-style-type: none">• 10 week internship program• Monday, June 12th - Friday, August 18th |
| Possible Location(s) | <ul style="list-style-type: none">• Southern California (Agoura Hills, Westlake Village, Moorpark, & Thousand Oaks) and Fort Worth, Texas• In Office - Hybrid Schedule (not remote-eligible)• <i>Housing accommodations are not provided by the company</i> |
| Interview Process | <ul style="list-style-type: none">• Complete SmartSheet survey (will be sent out by end of the week)• Talent Acquisition Team will potentially reach out to coordinate a 15-minute Zoom interview for initial Screening and then set up final round interview with Department leaders• Offers extended in April |
| Additional Details | <ul style="list-style-type: none">• Formal orientation• Intern social events• Executive speaker series Intern report-outs |

Application Development - Corporate

Presenter(s): Ben Zamanzadeh & Anand Bolangadi

| Topic | Details |
|---|---|
| Primary responsibility of department within Pennymac: | Corporate App Dev team develop applications, provide architecture and technical solution to multiple divisions within Pennymac. These include Portfolio Strategy, Finance, Mortgage Risk, Admin, Shared Services, and Marketing. |
| What interns will be doing: | <ul style="list-style-type: none">• Learn and Use State of the Art technologies to develop key applications• Work in a collaborative environment that provides you with mentorship.• Use the technologies such as Python, Node.JS, React, SQL/Postgres, AWS Lambda, AWS Services, GraphQL, Ruby/Rails, Data Science/Machine Learning• Actively develop software and research alternative solutions.• Continually learn, mentor and grow• Work directly with business users |
| What we're looking for: | Academic experience in one or more of the following: JS, Python, Node, React, Ruby/Rails, SQL, AWS, Data Science, JAVA programming, .NET, Machine Learning or Web Services. |
| Location(s) | <ul style="list-style-type: none">• Agoura Hills, CA• Fort Worth, Texas |

Application Development - Production

Presenter(s): Keith Lesser, Diego Pudacay

| Topic | Details |
|---|--|
| Primary responsibility of department within Pennymac: | Production Engineering develops products which support our loan origination and fulfillment activities at Pennymac. |
| What interns will be doing: | <p>Interns will be actively involved in helping to develop these products. They will be working hands on with primarily serverless applications in Typescript (Node/React) and/or Python. This might include:</p> <ul style="list-style-type: none">• Work hands on with AWS services such as Lambda, DynamoDB, Step Functions, etc and other technologies such as GraphQL and Machine Learning• Be actively involved in a Product team in an Agile/Scrum environment• Working with and learning from a variety of stakeholders in various disciplines• Acquiring real world experience with modern tech stacks |
| What we're looking for: | <ul style="list-style-type: none">• Academic knowledge of one or more of the above languages and exposure to some of the above technologies• Academic understanding of fundamental engineering concepts (design patterns, data structures, etc).• A desire to continue to learn and grow• Self motivated to expand your knowledge |
| Location(s) | <ul style="list-style-type: none">• Agoura Hills, CA |

Application Development - Production (Quality Engineering)

Presenter(s): Jaspal Gill

| Topic | Details |
|---|--|
| Primary responsibility of department within Pennymac: | The Application Development, Quality Engineering team focuses on building Test Harnesses and Test Automation Suites to ensure high quality product delivery. We work cross functionally with Product Managers/Owners, Business Analysts, Software Engineers , DevOps and Security |
| What interns will be doing: | The Software Engineer in Test (SDET) will be responsible for assisting Quality Engineering members build test automation harnesses and extending Test Automation Suites. Projects may include app development and QA automation across Capital Markets and Production Technology teams. This role will include using various technologies such as AWS (lambdas, step functions, cloudwatch), back-end API test frameworks, SQL development tools and various test automation frameworks. |
| What we're looking for: | What we're looking for: Academic or personal experience in one or more of the following: JS/Node, Python, React, .NET, SQL, AWS or Cloud Services, New Relic, SumoLogic, Salesforce.com Sales Cloud & Marketing Cloud. |
| Location(s) | <ul style="list-style-type: none">● Agoura, CA● Plano, TX |

Application Development - Servicing

Presenter(s): Darshan Mehta

| Topic | Details |
|-----------------------------|--|
| What interns will be doing: | The Application Developer will be responsible for the overall coding and design of technology solutions that address the business needs of Pennymac. Projects may include App development, and QA automation across loan servicing. This may include use of Message queue/Bus, Rules Engine (Drools), and Process Automation Manager(PAM) as well as some DB development. There may be some development using Clojure as well. |
| What we're looking for: | Academic experience in one or more of the following: JS/Node, Python, Node, React, Ruby/Rails, SQL, AWS, Data Science, JAVA programming, NET, Machine Learning or Web Services. |
| Location(s) | <ul style="list-style-type: none">● Agoura Hills, CA● Moorpark, CA● Plano, Texas |

Capital Markets

Presenter(s): Arman Bostani

| Topic | Details |
|---|--|
| Primary responsibility of department within Pennymac: | Develop systems which support Pennymac's Pricing, Financing, Trading, Hedging and Securitization activities. |
| What interns will be doing & what we're looking for: | <ul style="list-style-type: none">• Create complex, enterprise-transforming applications• Write high quality code -- we're big on code reviews• Use the latest tools and technologies (Ruby/Rails, Python, Typescript/React, Postgres, AWS Lambda, AWS API Gateway, containerization, etc.)• Research issues identified by the business and provide timely analysis• TDD - we're big on testing• Continually learn, mentor and grow• Work directly with business users <p>Qualifications:</p> <ul style="list-style-type: none">• Know dynamic programming languages (e.g. Ruby, Python, JS)• Know SQL databases (e.g. Postgres, Microsoft SQL Server)• Know data structures and how to use them appropriately• Good communication skills |
| Location(s) | <ul style="list-style-type: none">• Westlake Village |

Cloud Business Office

Presenter(s): Dovi Wilensky, Emanuel Rogoveanu

| Topic | Details |
|---|--|
| Primary responsibility of department within Pennymac: | We compile, develop, and deliver architectural guardrails; influence stakeholders, and ensure compliance with architectural guardrails within many technology domains that support the needs of product teams to reliably launch products and services. Drive the evolution of infrastructure, processes, products, and services by convincing decision-makers. |
| What interns will be doing & what we're looking for: | <ul style="list-style-type: none">• Participate and document architectural standards that enable DevOps practices such as infrastructure as code, and automated continuous integration/continuous deployment (CI/CD)• Synchronize regularly with the Cloud Platform Engineering team• Participate in optimizing solution architectures to manage costs and identify cost control mechanisms• Assist application solution architects design scalable, highly available, secure application solutions that leverage cloud services• Utilize cost/benefit models by mapping architecture to business outcomes and KPIs• Coordinate with Product Managers to incorporate the voice of the customer• Curate cloud reference architectures |
| Location(s) | <ul style="list-style-type: none">• Agoura Hills, CA |

DevOps Engineering

Presenter(s): Javier Martinez

| Topic | Details |
|---|---|
| Primary responsibility of department within Pennymac: | The DevOps Engineering team focuses on automation; building Infrastructure as Code (IaC), Continuous Integration (CI) and Continuous Deliver (CD) pipelines. The goal is to provide improved stability, performance, monitoring, testing, and the ability to rapidly deploy infrastructure and application code to multiple environments. |
| What interns will be doing: | <ul style="list-style-type: none">• Learn the fundamentals of building Infrastructure as Code and automation using our standard toolsets• Participate in building and releasing new Cloud Platform features and services• Monitor and troubleshoot issues for a wide range of systems• Utilize latest cloud services to improve existing workloads and deploy new solutions based on requirements• Automation, Automation, Automation |
| What we're looking for: | DevOps engineers work with a range of software tools and commonly have backgrounds in IT, System Administration or Software Development. Knowledge or experience in the following technical areas: Container concepts, Configuration Management, Cloud technology, Deployment automation and orchestration, Infrastructure automation, Source control and Open source OS. |
| Location(s) | <ul style="list-style-type: none">• Agoura Hills, CA• Plano, TX |

Enterprise Data Management & Analytics

Presenter(s): Aleksander Cichosz, Shu Wang & Charudatt Shenoy

| Topic | Details |
|---|--|
| Primary responsibility of department within Pennymac: | At the Enterprise Data & Analytics team, we focus on systematically centralizing, standardizing, and organizing data in order to produce high-quality, accurate insights which improve the company's decision-making and overall use of data to drive profitability. We develop solutions that empower our company to engage home buyers and efficiently originate, close, sell, and purchase loans from a single system of record. We use best in class big data tools, data architecture practices to architect, design, and develop data/analytic platforms (e.g., data warehouses, data lakes). |
| What interns will be doing: | <ul style="list-style-type: none">• Learn foundational concepts of data development and operational procedures• Learn production and operations issues as they relate to engineering• Work with the team to develop scalable, extensible solution architectures leveraging contemporary big-data technologies in an evolving operational framework• Participate in design, code, test, maintenance, enhance and decommission phases throughout software life cycle to contribute technical expertise and to identify issues• Assist the team to develop reliable solutions to complex problems which require the regular use of ingenuity and creativity |
| What we're looking for: | Basic learning experience on Big Data platforms and tools like AWS, Azure, GCP and tools like Spark, Kafka, Snowflake, AWS Glue, Python/PySpark, etc. Ability to structure and analyze data in appropriate framework (e.g., Excel, Access, VBA, SQL) Passion for data tools and processes to drive business insights Strong analytical thinking, process management and quality control Ability to quickly understand and appreciate underlying business context, problems and objectives of analytical projects |
| Location(s) | <ul style="list-style-type: none">• Agoura Hills, CA |

Information Security

Presenter(s): Cyrus Tibbs

| Topic | Details |
|---|---|
| Primary responsibility of department within Pennymac: | To protect Pennymac from cyber attacks, prevent data loss, and reduce the IT risk profile to an acceptable level to the business. We aim to develop a business enabling information security practice dedicated to continual improvement, the elimination of unnecessary toil, and able to respond to a constantly changing technology and risk landscape. |
| What interns will be doing: | The Information Security intern will execute threat management and resolve cyber incidents by learning to correlate security events and alerts, perform initial forensic investigation steps, and communicate findings and observations. The intern will have the opportunity to work cross-functional in AWS security, application security, vulnerability management, systems engineering, and insider risk management as well. |
| What we're looking for: | Course work and knowledge in cloud security, software development (any language), and cyber security are highly preferred. Membership in Layer 8 is preferred but not required. |
| Location(s) | <ul style="list-style-type: none">• Agoura Hills, CA• Plano, TX |

IT Administration

Presenter(s): Peter Corluyan

| Topic | Details |
|---|--|
| Primary responsibility of department within Pennymac: | IT Administration team members have cross-divisional exposure and impact through successful implementation and execution of development, instruction, and implementation of industry wide best practices related to project and product management. The team also focuses on the technology budget, cost monitoring and control, technology contracts and Vendor Management, and the technology strategic plan; all which are vital to Technology's success. Our team works directly with key business and technology leadership to execute and deliver on strategies critical to Pennymac's overall growth. |
| What interns will be doing: | The IT Admin Intern will partner with the team responsible for IT Vendor Management, IT Budget, IT Project Management office, and IT Strategic planning. This role will be mentored in creating actionable data models and have the opportunity to work with upper management and be exposed to many areas within technology. Skills developed may include leadership, project management, product management, communication, negotiation, presentations, relationship management, business technology, reporting, and knowledge of the end-to-end mortgage process. |
| What we're looking for: | A highly organized, detail oriented candidate with experience and interest in the following: Excel, Finance, Google Suite, Tableau, Jira, and Project Management. Candidates should also enjoy working in a team environment, possess good communication skills, both written and verbal, and have the ability to adapt to change while working in a fast paced environment. |
| Location(s) | <ul style="list-style-type: none">• Agoura Hills, CA• Moorpark, CA |

IT Data Analytics & FinOps

Presenter(s): Siyar Khaydar and Kevin Patel

| Topic | Details |
|---|--|
| Primary responsibility of department within Pennymac: | The Data Analytics team focuses on providing data insights that help the Information Technology make informed operational and financial decisions. |
| What interns will be doing & what we're looking for: | <p>IT Data Analyst will be responsible for using statistical tools to interpret data sets, to interpret trends and patterns that could be valuable for diagnostic and predictive analytics efforts. The IT Data Analyst must enjoy transferring data to information and be comfortable communicating results to stakeholders.</p> <ul style="list-style-type: none">Academic experience or interest in one or more of the following: Python, SQL, R, Tableau, Alteryx, Knime, Statistics, Mathematics, Data Modeling, Cloud Costs/Optimization. <p>Data Engineer will support data analysts on data initiatives and will ensure optimal data delivery architecture is consistent throughout analytics ongoing projects. The Data Engineer will be responsible for developing the logical data pipelines for new analytics models, as well as optimizing the data flow.</p> <ul style="list-style-type: none">Academic experience or interest in one or more of the following: Python, JavaScript (D3.js), Java, API Interactions, SQL, AWS cloud services: EC2, Redshift and Athena. |
| Location(s) | <ul style="list-style-type: none">Agoura Hills, CAHybrid |

IT Service Management (ITSM)

Presenter(s): Babatunde Reuben

| Topic | Details |
|---|--|
| Primary responsibility of department within Pennymac: | The Pennymac IT Service Management (ITSM) team works with IT and corporate teams to improve process and workflow. We use established industry guidance (for example ITIL/ITSM, COBIT, IT4IT; etc.) and the industry-leading ServiceNow platform to streamline processes and achieve timely, effective, and quality IT solutions. |
| What interns will be doing: | <p>The IT Service Management interns will be responsible for:</p> <ol style="list-style-type: none">1) Automation Test Framework (ATF) - Update current and create new tests from business cases utilizing no to low code scripting. Create standards for ATF execution across application/module updates/code deployments reducing the manual efforts in test execution.2) Knowledge Base Management - Establish a process for maintaining the lifecycle of knowledge base articles used to store, and share knowledge and information within the organization. Support different levels of internal business customers to get the most value from this service delivery method, including incident management, change management, and service level management3) Virtual Agent - Increase the utilization of Virtual Agent (chatbot) by creating flows to help solve issues and deliver results after performing an analysis of customer interactions and issues. By turning high-volume standardized interactions into an elevated user experience powered by artificial intelligence. |
| What we're looking for: | ITSM engineers work with a range of software tools and commonly have backgrounds in IT, ServiceNow System Administration, and the following languages: SQL, PowerShell, and JavaScript. |
| Location(s) | <ul style="list-style-type: none">● Agoura, CA |

Marketing Technology

Presenter(s): Jaspal Gill

| Topic | Details |
|---|---|
| Primary responsibility of department within Pennymac: | Marketing Technology supports our direct lending business by attracting mortgage borrowers to refinance existing loans or a new loan to purchase a home. The team supports marketing efforts to engage customers, process leads, and assist the team in conversions. |
| What interns will be doing: | <ul style="list-style-type: none">● Identify and implement improvements to support Loan Officers in Salesforce● Work with marketing teams to develop new messages to be sent via email and sms● Build reports to help business users more efficiently manage their business● Build Prototype UI/UX Screens/Experiences and Loan Officer Journeys● Enhance and grow our Customer Data Platform |
| What we're looking for: | <ul style="list-style-type: none">● Prior experience with Salesforce or other CRM (Apex/Lightning/DML)● Familiarity with scripting languages● UI/UX Designers with experience with FIGMA (or similar design tools and workflow)● Experience with SQL (SOQL)● Willingness to learn and experiment |
| Location(s) | <ul style="list-style-type: none">● Agoura Hills, CA● Plano, TX |

Network & Telephony Engineering

Presenter(s): Steven Eldredge & Preston Baxter

| Topic | Details |
|---|--|
| Primary responsibility of department within Pennymac: | The Network and Telephony teams are responsible for maintaining the connectivity of networks in terms of data, voice, calls, videos, fiber optic networks, wireless networks, and cloud networks in AWS. |
| What interns will be doing & what we're looking for: | <p>Network Engineer will be responsible for building/maintaining fiber optic, wireless, and cloud networks. This will provide an opportunity to learn network engineering, systems engineering, Next Generation Firewalls (Palo Alto) on-prem and in the cloud, namely AWS, latest wireless technologies, and scripting and automation.</p> <ul style="list-style-type: none">• Familiar with scripting languages, AWS infrastructure, information security best practices, routing and switching concepts, and proven troubleshooting methods. <p>Telephony Engineer will help maintain and improve the organization's telephony infrastructure. This will provide an opportunity to learn Linux, Scripting, Web Design, and a variety of telecommunication technologies such as SIP/RTP, and FreeSWITCH.</p> <ul style="list-style-type: none">• Familiar with Open Source and scripting/programming languages such as SQL, GO, GIT, Chef, AngularJS, CSS, JavaScript, Python, Bash, and AWS services. |
| Location(s) | <ul style="list-style-type: none">• Agoura Hills, CA• Plano, TX |

Site Reliability Engineering (SRE)

Presenter(s): Jorge Ruiz & Raul Herrera

| Topic | Details |
|---|--|
| Primary responsibility of department within Pennymac: | <p>Site Reliability Engineers (SRE) create a bridge between development and operations by applying a software engineering mindset to system administration topics. They split their time between daily operations duties and various projects that help ensure site reliability and performance.</p> <p>As an SRE on the Pennymac Operations Center team, you will help provide 24/7 monitoring and support of the company's IT Infrastructure. Ideal candidates should have experience in Windows and Linux administration, in addition to experience working in AWS, as Pennymac is now almost completely migrated into the AWS cloud. Individuals in this role should be comfortable working in a fast-paced environment. Multitasking and communicating quickly and accurately, is critical to the success of anyone in this role.</p> |
| What interns will be doing & what we're looking for: | <p>Monitoring - 24/7 health monitoring of Pennymac's IT Infrastructure using tools such as Nagios, New Relic and AWS CloudWatch</p> <p>Systems Administration - Perform various administrative tasks in both Windows and Linux environments</p> <p>Incident Management - Coordinate with Pennymac's Incident Management team to resolve production impacting service outages</p> <p>Virtual Desktop Management - Maintenance and troubleshooting of our virtual desktop environment</p> <p>Deployments - Handle application and website code deployments, making use of tools such as Jenkins and GitLab</p> <p>Project Management - Organize and prioritize tasks, adhere to deadlines, and achieve all project goals within the given constraints</p> <p>Experience with a "cloud" provider, Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform (GCP). Experience with Active Directory, VmWare, monitoring tools (Opsview or New Relic) or ticketing system (ServiceNow, Jira) is a plus. Experience with Powershell, Python, JavaScript or other programming languages would be great</p> |
| Location(s) | <ul style="list-style-type: none">• Westlake Village, CA• Agoura, CA |

Next Steps

Topics: Next steps in the recruitment process

Next Steps

- Complete SmartSheet Survey by Feb 28th, 2023 at 9am PST
 - If not completed by the deadline, you will not move forward in the process
- Talent Acquisition may reach out throughout the month of March to conduct a 20-minute Zoom screen
- Those successful during the screening interview will be invited to a final round Zoom interview
 - It is possible to be interviewed by multiple departments (separate interviews will be set up if more than one department is looking to interview)
 - The Zoom interviews may be a one-on-one or group interview (multiple interviewers from that team) - we will specify prior
- We will reach out to those receiving internship offers throughout the month of April

THANK YOU!



For additional questions please email
CampusRecruiting@Pennymac.com