Developer Onboarding Plan

This comprehensive onboarding plan outlines the structured learning and development journey for new PixelProofy engineers. It's designed to provide a solid foundation in our technologies, processes, and culture, enabling new hires to quickly become productive and contributing members of the team.

**Phase 1: Foundations (Week 1)**

* **Goals:**
  + Onboarding & Administrative Tasks: Complete all necessary paperwork, benefits enrollment, and IT setup.
  + Access & Setup: Gain access to all required tools, repositories, communication channels (Slack, email lists), and internal systems.
  + Company & Culture: Understand PixelProofy’s mission, values, culture, and organizational structure.
  + Product Overview: Gain a high-level understanding of PixelProofy’s product offerings, target audience, and competitive landscape.
  + Security & Compliance: Complete mandatory security and compliance training.
  + Team Introductions: Meet and connect with team members, managers, and key stakeholders.
* **Training Modules:**
  + Welcome to PixelProofy: Company overview, mission, values, and culture.
  + HR & Administrative Onboarding: Benefits, payroll, policies, and procedures.
  + IT & Systems Access: Account setup, software installation, and network access.
  + Company & AI Ethics Overview: Responsible AI principles, ethical considerations in deepfake detection, and PixelProofy’s commitment to ethical AI development.
  + Tech Stack Walkthrough (Python, TensorFlow, OpenCV, Milvus, AWS/GCP, specific frameworks, etc.): High-level overview of the technologies used at PixelProofy.
  + Version Control & Git Best Practices: Hands-on training on Git workflows, branching strategies, and pull request processes.
  + Security Training (GDPR, CCPA, AI Ethics & Responsible AI Usage, OWASP Top 10, secure coding practices): Comprehensive security training covering data privacy regulations and secure development practices.
  + Internal Documentation & API Familiarization: Introduction to PixelProofy’s internal documentation, API specifications, and knowledge base.
  + Meet the Team: Introductory meetings with team members and managers.
* **Deliverables:**
  + Completed onboarding paperwork.
  + Access to all necessary systems and tools.
  + Completion of mandatory training modules.
  + Introductions to key team members.

**Phase 2: Core Technologies & First Contributions (Weeks 2-4)**

* **Goals:**
  + Development Environment Setup: Set up a local development environment and configure necessary tools.
  + Codebase Familiarization: Gain a deeper understanding of the codebase structure, key modules, and coding conventions.
  + Team Workflows: Learn and participate in team workflows, including Agile/Scrum methodologies, sprint planning, daily stand-ups, and code reviews.
  + First Contributions: Fix a small bug or implement a minor feature to gain practical experience with the development process.
  + Testing & Quality: Understand the importance of testing and learn how to write unit tests and integration tests.
* **Training Modules:**
  + Deep Dive into PixelProofy’s Tech Stack: Hands-on sessions with specific technologies, including Python, TensorFlow, OpenCV, Milvus, and relevant frameworks.
  + Codebase Architecture & Microservices: Detailed explanation of the system architecture and how different components interact.
  + Debugging & Performance Optimization: Techniques for identifying and resolving bugs, optimizing code for performance, and using debugging tools.
  + Unit Testing & CI/CD Pipeline: Best practices for writing unit tests, using testing frameworks, and integrating code into the continuous integration/continuous deployment pipeline.
  + API Development & Integration with Frontend: Understanding API design principles, working with RESTful APIs, and integrating with the frontend.
  + Agile/Scrum Methodology: Introduction to Agile principles, Scrum framework, and team processes.
  + Code Review Best Practices: Guidelines for conducting effective code reviews and providing constructive feedback.
* **Deliverables:**
  + Functional local development environment.
  + Successful completion of a small bug fix or minor feature implementation.
  + Participation in code reviews.
  + Contribution to the codebase.

**Phase 3: Project Ownership & Advanced Concepts (Months 2-3)**

* **Goals:**
  + Feature Ownership: Take ownership of a more substantial feature and lead its development from design to deployment.
  + Security Review: Conduct a security review for code contributions to ensure adherence to secure coding practices.
  + Deepfake Model Training: Gain a deeper understanding of deepfake model training, including data collection, preprocessing, model architecture, training process, and evaluation metrics.
  + Data Pipelines: Learn about data pipelines, data processing techniques, and database optimization.
  + Scalability & Performance: Explore techniques for enhancing system scalability and performance.
* **Training Modules:**
  + ML Model Training (Deepfake Detection Algorithms): In-depth study of deepfake detection algorithms, model architectures, training methodologies, and performance evaluation.
  + Data Pipelines & Database Optimization: Working with data pipelines, data preprocessing techniques, database design, and query optimization.
  + Scalability & Performance Enhancements: Techniques for improving system performance, including caching, load balancing, and distributed computing.
  + Advanced AI Security Techniques: Advanced topics in AI security, including adversarial attacks, defense mechanisms, and model robustness.
  + Project Management Fundamentals: Basic project management principles, including planning, execution, and tracking.
* **Deliverables:**
  + Successful completion and deployment of a complete feature.
  + Completion of a security review for code contributions.
  + Demonstrated understanding of deepfake model training and data pipelines.
  + Active participation in project planning and execution.

**Phase 4: Continuous Growth & Mentorship (Ongoing)**

* **Goals:**
  + Continuous Learning: Stay up-to-date with the latest advancements in AI, deepfake detection, and related technologies.
  + Mentorship: Contribute to the growth of other team members by providing mentorship and guidance.
  + Innovation: Explore new ideas and contribute to the development of innovative solutions.
  + Ownership & Responsibility: Take ownership of larger projects and contribute to strategic initiatives.
* **Activities:**
  + Regular participation in technical discussions and knowledge sharing sessions.
  + Contribution to open-source projects or research papers.
  + Mentoring junior engineers and providing technical guidance.
  + Attending conferences, workshops, and online courses.
  + Participating in hackathons and internal innovation challenges.
* **Performance Reviews:** Regular performance reviews will provide feedback on progress and identify areas for growth.