think tank
BUSINESS SOLUTIONS

Your companion for successful digital transformation.

PFE E-book - **2024**

think tank Presentation

ABOUT US

Founded in 1997 and headquartered in Munich, think tank Business Solutions is a key player in digital transformation across Europe, Africa and the Middle East (MEA).

As an IT service provider, we specialize in developing customized digital solutions tailored to our clients' and partners' needs.

Munich
Headquarters

Zurich
Subsidiary

Tunis
Subsidiary

Saudi Arabia

UAE

Mauritania

Burkina Faso

Benin

Ivory coast

Madagascar

Locations of our customers and partners

think tank Values

At think tank, transparency, team spirit, excellence, and innovation form the pillars of a win-win partnership.

RE≈CREATE
Your Operations

TRANSPARENCY
Comprehensive Documentation, Regular Communication & Reporting.

COLLABORATION
We combine our efforts to effectively address your digital needs.

INNOVATION
Our R&D efforts place us at the forefront of technological advancements.

EXCELLENCE
On-time IT product delivery (99.95%) and guaranteed product quality.
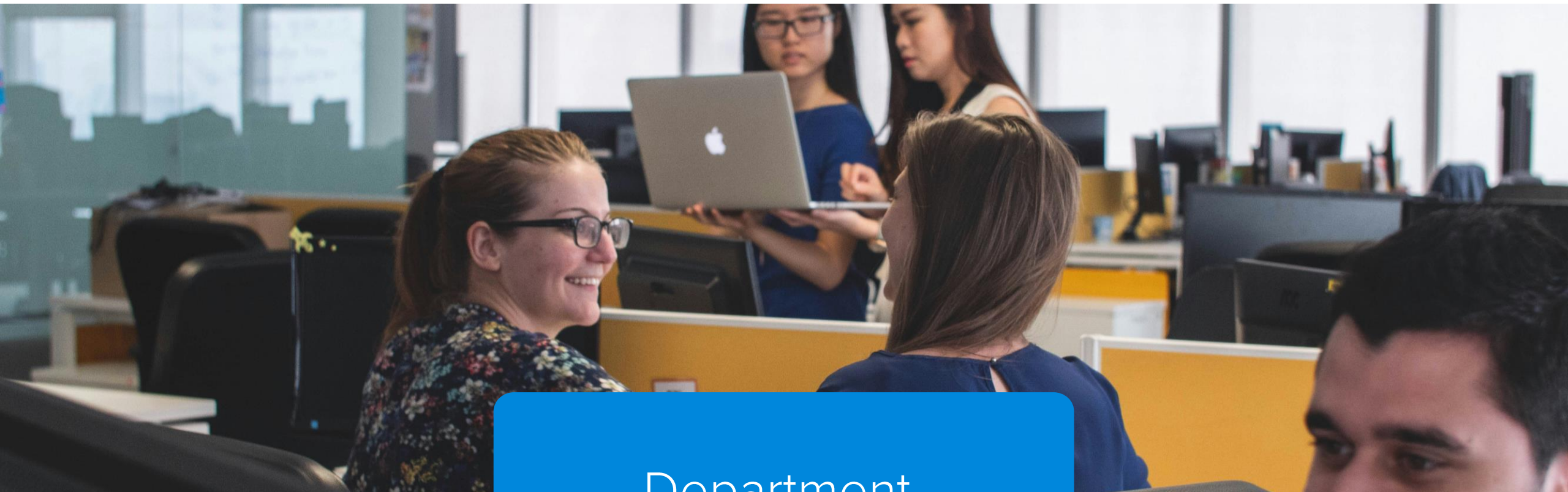
Shape The Future With Us

Are you looking for a company where you can pursue your passion, contribute and develop your skills and talents?

You've come to the right place!

Discover our internship topics

Department

Human Resources

Implementing a Continuous Performance System

Description

You will collaborate with the HR department and team leads to dive into the word of HR technology and performance Management.
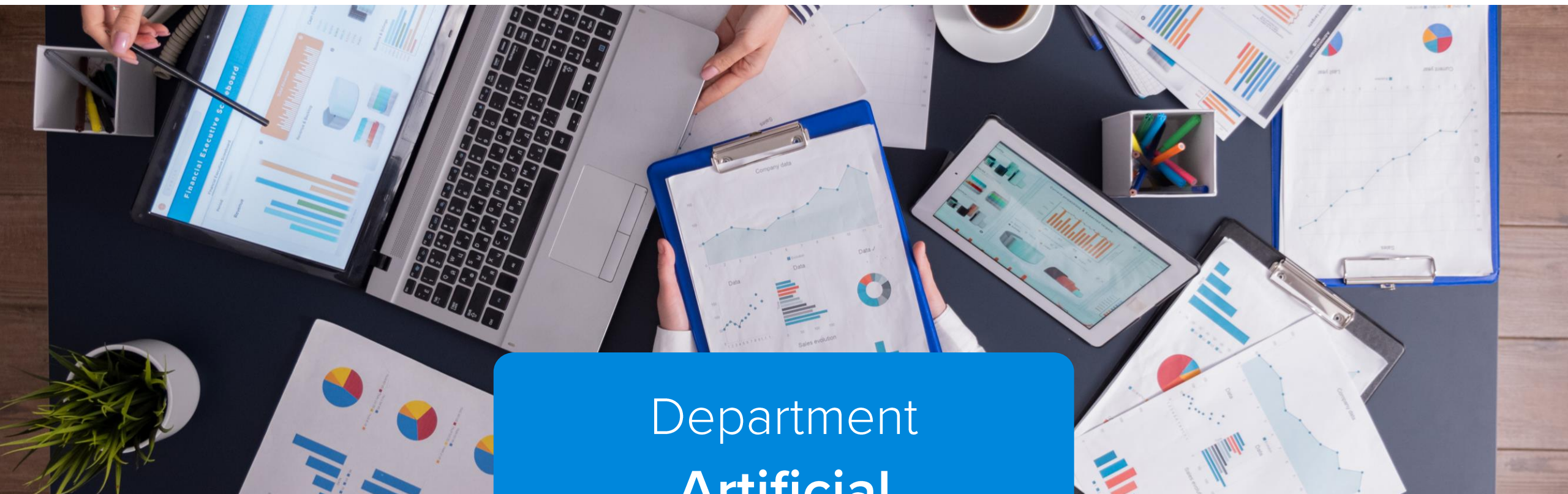
Main Tasks:

- Analyse and understand the current performance management system.

- Research and explore tools and technologies for continuous performance monitoring.

- Propose a system that allows real-time feedback and performance tracking.

⌨ **Technologies:**
Microsoft Office (Outlook, PowerPoint, Excel), Canva, PTS

📅 **Duration:**
4-6 months

👤 **Profile:**
M2 HR Student

Department
Artificial Intelligence

AI-Powered Generator for Application User Guides

Description

This study explores the development of an AI tool that generates user guides from written user stories and test cases. The main goal is to create a Proof of Concept (PoC) demonstrating the feasibility and effectiveness of using AI to automate technical documentation, thereby improving efficiency and reducing errors.

Main Tasks:

- Data collection and Pre-processing.

- Model Selection and Training

- Development of Backend system

- Evaluating the accuracy, coherence, and quality of the generated user guides.

⌨ Technologies:
NLP, GPT, DocRaptor, Python, JS

📅 Duration:
4-6 months

👤 Profile:
Artificial Intelligence Engineering Student

AI Sourcing Strings Generator

Description

This project aims to design and develop an intelligent sourcing strings generator that enables recruiters to create customized and efficient search queries for talent sourcing. The generator will leverage predefined templates, keywords, and advanced.

Main Tasks:

- Analysis: conduct interviews with HR professionals and recruiters, analyze existing job descriptions and search queries to identify patterns, common keywords, and structures. etc.

- Develop algorithms for generating search strings from predefined templates and keywords.

- Use Natural Language Processing (NLP) to enhance the customization of queries.

- Integrating web scraping into your intelligent sourcing strings generator.

💻 Technologies:	📅 Duration:	👤 Profile:
NLP, Python, BeautifulSoup, Scrapy or Selenium	4-6 months	Artificial Intelligence Engineering Student

Autonomous Scrum Master AI Assistant

Description

REF [PTS-JA-10864844]

This project aims to develop an AI-powered Scrum Master (SM) Assistant to enhance agile workflows by automating key Scrum tasks and providing data-driven insights.

The assistant will support development, testing, and DevOps processes, monitor team performance, facilitate efficient sprint management, and proactively address impediments, improving productivity and alignment with project goals.

Main Tasks:

- Develop the frontend user interface using frameworks like Angular or React .

- Build the backend services and integrate with project management tool PTS-Agile.

- Train and deploy ML models for tasks such as performance prediction and issue resolution suggestions.

⌨ Technologies:
NLP, ML, Angular, Jenkins, PTS

📅 Duration:
4-6 months

👤 Profile:
Artificial Intelligence Engineering Student

Department
Testing with AI

JUnit Test Generator

Description

REF [PTS-JA-10864839]

An AI-powered Eclipse extension designed to streamline Junit testing by automatically generating, running, and optimizing tests. Ensuring higher test coverage (Sonar coverage) and efficiency, it simplifies test maintenance, improves code quality, and accelerates the development workflow.

Main Tasks:

- Analysis phase: automatic test generation, running tests, optimizing tests based on coverage metrics, etc.

- Design and Implementation of the AI-powered extension.

- Use the tool on real-world Java projects to test its effectiveness, gather feedback, and make necessary adjustments.

💻 **Technologies:**	📅 **Duration:**	👤 **Profile:**
Eclipse IDE/PDE, Junit, SonarCube, ML, Jenkins, Git, Java/Python	4-6 months	Artificial Intelligence Engineering Student

Automated Performance Testing with AI

Description

Use AI algorithms to monitor and analyse system performance data, dynamically adjusting testing parameters and predicting potential failures.

Main Tasks:

- Use machine learning models to analyse historical performance data and set dynamic thresholds.

- Implement AI algorithms to simulate peak load conditions based on real-world usage patterns.

- Integrate predictive analytics to alert the team of potential bottlenecks before they occur.

⌨ **Technologies:**
Jmeter , Python ,
Selenium/Playwright ,
Machine learning

📅 **Duration:**
4-6 months

👤 **Profile:**
Artificial Intelligence
Engineering Student

Regression Testing with AI and Model-Based

Description

REF [PTS-JA-10864856]

Combine AI and model-based testing to simulate expected application behaviour under various scenarios and automatically validate results.

Main Tasks:

- Design a model representing the application's expected behaviour (inputs, expected results, and sequences).

- Use this model to automatically generate test cases that simulate real user interactions.

- Implement AI-based comparison to validate the application's behaviour against the expected outcomes and flag any deviations, focusing on critical changes.

⌨ **Technologies:**
Python, selenium/Playwright, Machine learning

📅 **Duration:**
4-6 months

👤 **Profile:**
Artificial Intelligence Engineering Student

A/B Testing for visual regression testing

Description

A/B testing can be adapted for visual regression testing to detect differences between the interfaces. By automating comparisons, understanding context, detecting anomalies, generating reports, handling dynamic content, AI helps ensure that updates and modifications to applications are robust and user-friendly.
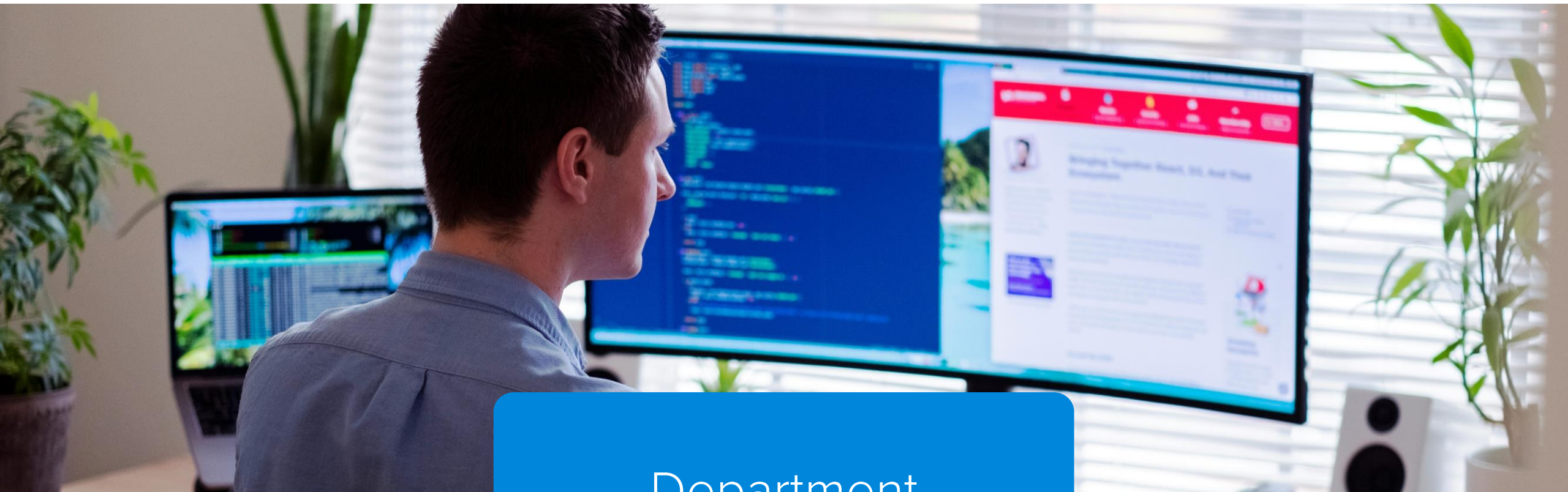
Main Tasks:

- Analysis of current trends and technologies used for A/B testing and visual regression analysis.

- Design and Implementation of the A/B testing process and integrate with Quality management tool PTS-QA tool.

- Design and implement a process for capturing screenshots and organizing them by version.

🖥 Technologies:	📅 Duration:	👤 Profile:
ML, OpenCV/Pillow, Selenium, Python, Angular	4-6 months	Artificial Intelligence Engineering Student

Department
Development

Multi-Provider Authentication with Automated Security and Reporting

Description

▶ **REF [PTS-JA-10864858]**

This project focuses on the design and implementation of a flexible authentication service that supports multiple providers (Keycloak, OAuth2, LDAP, Gluu).The system integrates automated security testing using OWASP ZAP for penetration testing and vulnerability scanning.

Security test results are displayed in real-time on an Angular front-end application

The solution will incorporate continuous security assessments within the CI/CD pipeline, ensuring that vulnerabilities are identified and resolved promptly, enhancing the overall security posture of the application.
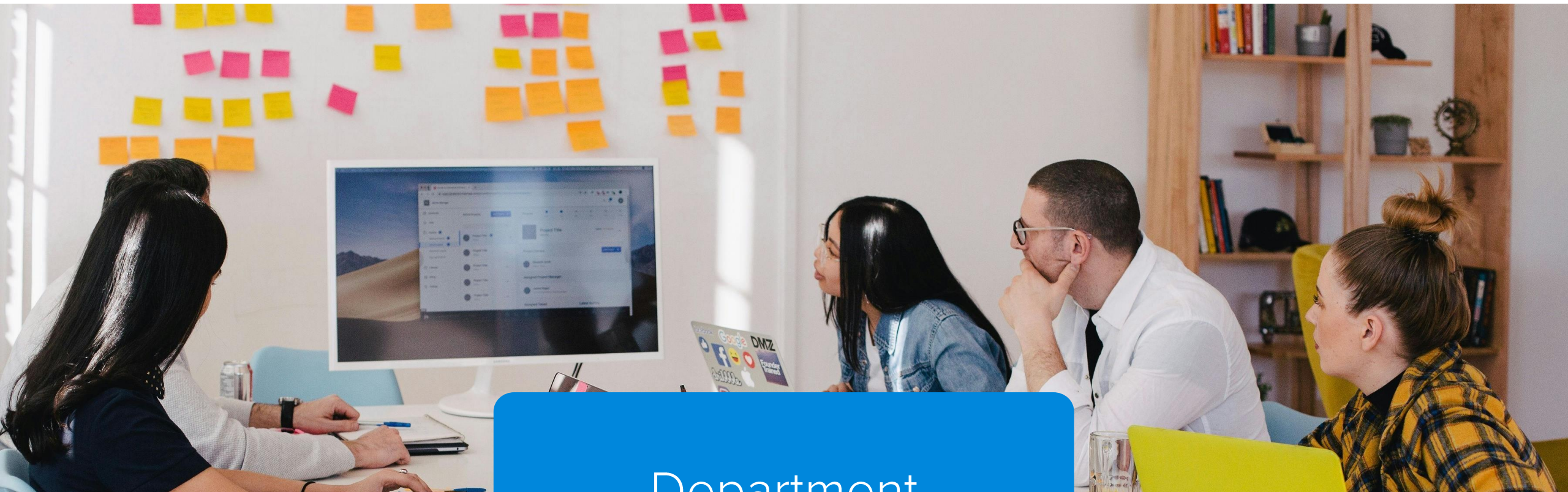

⌨ **Technologies:**
Keycloak, OAuth2, LDAP, JWT, Gluu, OWASP ZAP, SonarQube, GitLab , CI/CD, Angular

📅 **Duration:**
4-6 months

👤 **Profile:**
Software Engineering student

Department
UX/UI

Designing a Mobile App for Project & Business Management

Description

▶ **REF [PTS-JA-10865831]**

We are looking to design and prototype a mobile application that brings key business and project management features to mobile devices, based on our existing web application. Features include task management, timesheets, real-time notifications, and project or goal tracking.

The app will be designed for teams using agile methods, helping to streamline operations, improve collaboration, and enhance productivity. It will leverage our current design system, adapting it to create a seamless and intuitive mobile user experience.

This project will provide an opportunity to improve the user experience (UX) and interface design (UI) for a growing user base on mobile devices.

🖥 **Technologies:**
Figma, Adobe Creative suite (Illustrator, Photoshop...), Design system, Mobile Design, Agile

📅 **Duration:**
3-4 months

👤 **Profile:**
Bachelor's or Master's degree in Design, Communication and Media

How to apply? Easy!

1   Pick a subject that excites you most from the e-book.

2   Send your updated resume to jobs@thinktank-tunisie.com and indicate the REF in the e-mail subject.

3   That's all! ☺

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