



OPEN INNOVATION FOR HEALTH, LIVING AND WELLBEING

Re-THINKING HEALTH.

Heidelberg / Mannheim

2022 / 2023



A light blue background featuring a faint grid pattern. Overlaid on the grid are several white icons: a hand holding a heart with a pulse line, four circular progress bars showing percentages (98%, 69%, 58%, 45%), and a shield with a cross. In the bottom right corner, there is a dark rectangular overlay containing the text "JOIN OUR TEAM" in large, white, sans-serif letters. A person's hands are visible at the bottom of this overlay, suggesting someone interacting with a device.

HEALTH INNOVATION LAB - HIL



OPEN INNOVATION LABS FOR HUMAN HEALTH, LIVING AND WELLBEING

HIL is an approach to accelerate health innovations from academic centers to patients and health professionals.

We – an esteemed collection of health scientists, professionals and technologists – are devoted to change the foundations of health and medical care by translating scientific evidence into preventive technologies.

We are leveraging exponential health technologies – e.g. precision health technologies, artificial health intelligence, or personalized prevention – to expand human health, living and wellbeing.

Join our mission!



HEALTH INNOVATION LAB - HIL

HEALTH  INNOVATION LAB
OPEN INNOVATION FOR HEALTH, LIVING AND WELLBEING

PARTNER NETWORK

HEALTH INNOVATION LAB

OPEN INNOVATION FOR HEALTH, LIVING AND WELLBEING



UNIVERSITÄT HEIDELBERG | ZUKUNFT SEIT 1386

Medizinische Fakultät Mannheim
der Universität Heidelberg
Universitätsklinikum Mannheim



Medizinische Fakultät Mannheim
der Universität Heidelberg
Universitätsklinikum Mannheim

neueshandeln

PRAEVIDA
MEDICAL



98%



MVZ Crailsheim
Medizinisches Versorgungszentrum Crailsheim GmbH



HEIDELBERG IT



Jan. Feb. Mar. Apr. May. Jun. J.

HIL – JOB OFFERS

OPEN POSITIONS

HIL is offering a wide range of positions in data science, user / patient experience, machine learning and development, security and operations (MLOPS, DEVOPS), software development and engineering.

Positions range from working students, young, medium to senior level experts.

We offer in addition **bachelor, master and PhD thesis** in our HIL and beyond. Join as a student on all levels as a working student and experience the flavors of world leading research and development.

Apply now for one of the following positions!

Any questions for bachelor, master or PhD thesis?
Email to [andre.baumgart\(at\)medma.uni-heidelberg.de](mailto:andre.baumgart(at)medma.uni-heidelberg.de)

And more information here:



OPEN POSITIONS

OVERVIEW of 9 AREAS

User Engagement

UX Engineer

Engaging people, patients and health professionals in their user journey

Figma, Mockups, ...

UI Designer

Design world leading multi-modal user interactions

Sketch, Adobe XD, Figma, ...

UIX Developer

Engage people, design and implement user experiences using mobile technologies

iOS, Android, Web, ...

Smart Applications

Data Scientist

Find patterns in health data and design intelligent systems for healthier living.

Python, Jupyter, R, SQL, ...

ML Engineer

Implement intelligent systems and algorithms using modern AI platforms

Pytorch, GraphML, ...

Data Engineer

Implement the backbone of Services: database and health data systems

JITSU, Airflow Pipelines, ...

Automated Pipelines

Service Developer

Bring application services into practice: APIs, Identity, Applications, and more

Containers, Java, Rust ...

DEVOPS Engineer

Design world leading development and operations pipelines with a focus in security

DEVOPS Pipelines, ...

MLOPS Engineer

Bring ML/AI into real-world applications: data versioning, model factories, monitoring

MLOPS Pipelines, ...

UX ENGINEER (WORKING STUDENT, JUNIOR, SENIOR)

YOUR MISSION

- ENABLE MULTI-MODAL FRONT-ENDS FOR PEOPLE, PATIENTS, HEALTH-PROFESSIONALS
- BE THE LEADER IN DRIVING UX IMPLEMENTATION
- UNDERSTAND THE TRANSLATION OF UX DESIGN INTO IMPLEMENTATION PATTERNS

Your Tasks

- DEFINE AND FORMALIZE USER NEEDS AND STAKEHOLDER REQUIREMENTS
- TRANSLATE REQUIREMENTS INTO UI/UX REQUIREMENTS AND UI DESIGNS
- IMPLEMENT REQUIREMENTS AND USER TESTS
- DEFINE ACCEPTANCE REQUIREMENTS AND TEST FOR THE UI
- PARTICIPATE IN USER VALIDATION AND PATIENT JOURNEY IMPLEMENTATION

Your Profile

- UX DESIGNER WITH EXPERIENCE IN UX TOOLS AND DESIGN METHODS / APPLICATIONS
- PROFOUND KNOWLEDGE IN UX DEVELOPMENT OR WEB TECHNOLOGIES
- FAMILIAR OR WILLING TO LEARN THE MEDICAL UX STANDARDS AND DEVELOPMENT PROCESSES

UI DESIGNER (WORKING STUDENT, JUNIOR, SENIOR)

YOUR MISSION

- ENABLE MULTI-MODAL FRONT-ENDS FOR PEOPLE, PATIENTS, HEALTH-PROFESSIONALS
- BE THE LEADER IN DRIVING UI IMPLEMENTATION
- UNDERSTAND THE TRANSLATION OF UI DESIGN INTO IMPLEMENTATION PATTERNS

Your Tasks

- DEFINE AND FORMALIZE USER NEEDS AND STAKEHOLDER REQUIREMENTS
- TRANSLATE REQUIREMENTS INTO UI REQUIREMENTS AND UI DESIGNS
- DEFINE ACCEPTANCE REQUIREMENTS AND TESTS FOR THE UI
- PARTICIPATE IN USER VALIDATION AND PATIENT JOURNEY IMPLEMENTATION / REDESIGN

Your Profile

- DESIGNER WITH EXPERIENCE IN UI TOOLS AND DESIGN METHODS / APPLICATIONS
- PROFOUND KNOWLEDGE IN UI DEVELOPMENT OR WEB TECHNOLOGIES
- FAMILIAR OR WILLING TO LEARN THE MEDICAL UI STANDARDS AND DEVELOPMENT PROCESSES



2
DEFINE

UIX DEVELOPER (WORKING STUDENT, JUNIOR, SENIOR)

YOUR MISSION

- USE FUTURE UIX METHODS AND FRONT-END TECHNOLOGIES
- ENABLE MULTI-MODAL FRONT-ENDS FOR PATIENT, HEALTH-PROFESSIONAL
- FRONT END DEVELOPMENT (NATIVE, HYBRID)
- IMPLEMENT MOST MODERN NATIVE UIs

Your Tasks

- TRANSLATE REQUIREMENTS INTO SOFTWARE UI DESIGNS
- IMPLEMENT REQUIREMENTS INTO FRONT-END AND USER TESTS
- DEFINE ACCEPTANCE REQUIREMENTS AND TEST FOR THE UI
- PARTICIPATE IN USER VALIDATION AND PATIENT JOURNEY IMPLEMENTATION / REDESIGN

Your Profile

- FRONT END DEVELOPER WITH PROFOUND EXPERIENCE IN FRONT END TOOLS AND DESIGN METHODS / APPLICATIONS
- KNOWLEDGE IN NATIVE MOBILE DEVELOPMENT OR WEB TECHNOLOGIES
- FAMILIAR OR WILLING TO LEARN THE MEDICAL UI STANDARDS AND DEVELOPMENT PROCESSES

HEALTH DATA SCIENTIST (WORKING STUDENT, JUNIOR, SENIOR)

YOUR MISSION

- LOVE FINDING PATTERN IN HEALTH DATA
- ENABLE MULTI-MODAL ANALYSIS OF DATA IN A COHERENT PIPELINE
- DESIGN INTELLIGENT SYSTEMS
- USE MACHINE LEARNING TO PREDICT, DIAGNOSE AND TREAT

Your Tasks

- DESIGN INTELLIGENT HEALTH SYSTEMS USING ANNOTATION METHODS FOR MACHINE LEARNING
- TRANSLATE RESEARCH QUESTIONS INTO DATA AND MODELS
- USE PYTHON / R TO AUTOMATE DATA PIPELINE AND DATA MINING
- APPLY STATISTICAL REASONING TO ANSWER HEALTH QUESTIONS
- IMPLEMENTATION / REDESIGN REUSABLE COMPONENTS FROM JUPYTER TO LIBRARIES

Your Profile

- EXPERIENCE IN STATISTICAL DESIGN AND TOOLS
- KNOWLEDGE IN MACHINE LEARNING ALGORITHMS (NOT JUST DEEP!)
- FAMILIAR OR WILLING TO LEARN THE MEDICAL SEMANTIC STANDARDS AND DEVELOPMENT PROCESSES

ML ENGINEER (WORKING STUDENT, JUNIOR, SENIOR)

YOUR MISSION

- IMPLEMENT INTELLIGENT SYSTEMS USING MACHINE LEARNING PLATFORMS
- ENABLE MULTI-MODAL PRODUCTS TO OPERATE IN SCALEABLE ENVIRONMENTS
- DEVELOPMENT OF CLOUD OR EDGE INFERENCE



Your Tasks

- DESIGN AND IMPLEMENT INTELLIGENT HEALTH SYSTEMS USING MACHINE LEARNING FRAMEWORKS
- TRANSLATE RESEARCH QUESTIONS INTO DATA AND MODELS
- USE PYTHON / R TO AUTOMATE DATA PIPELINE AND DATA MINING
- IMPLEMENTATION USING VALIDATED COMPONENTS

Your Profile

- PROFOUND KNOWLEDGE IN PYTHON AND PYTORCH
- FAMILIAR WITH STRUCTURED AND VOICE/TEXT DATA
- FAMILIAR OR WILLING TO LEARN MLOPS PLATFORMS
- FAMILIAR OR WILLING TO LEARN THE GRAPHML ALGORITHMS, MEDICAL STANDARDS AND DEVELOPMENT PROCESSES



HEALTH DATA ENGINEER (WORKING STUDENT, JUNIOR, SENIOR)

YOUR MISSION

- INTEGRATING REAL WORLD DATA INTO HIGH QUALITY HEALTH DATA REPOSITORIES
- ENABLE MULTI-MODAL DATA ANNOTATION MECHANISM TO HEALTH DATA
- DEVELOP SECURE DATA PIPELINES AND ANNOTATION PLATFORMS

Your Tasks

- USE DATA INTEGRATION PLATFORM TO IDENTIFY, TRANSFER, INTEGRATE AND LINK REAL WORLD DATA, E.G. USING JITSU, AIRFLOW
- IMPLEMENT THE DATA BACKBONE OF SERVICES: DATABASE AND DATA INTEGRATION SYSTEMS FOR DATA AND DATA PIPELINE VERSIONING
- ANNOTATE HEALTH DATA, E.G. WITH SNOMED AND HL7/FHIR

Your Profile

- HEALTH SCIENTIST OR A PERSON WHO LOVES TO WORK WITH HEALTH DATA
- KNOWLEDGE IN INTEGRATION PLATFORM USING JAVA, PYTHON OR RUST
- FAMILIAR OR WILLING TO LEARN THE MEDICAL STANDARDS AND DEVELOPMENT PROCESSES

SERVICE DEVELOPER (WORKING STUDENT, JUNIOR, SENIOR)

YOUR MISSION

- DESIGN AND BUILD HEALTH SERVICES AND APPLICATIONS
- ENABLE MULTI-MODAL SOFTWARE SERVICES FOR HEALTH PLATFORMS
- CONNECT WORLD LEADING HEALTH SERVICE OPEN-SOURCE STACKS
- IMPLEMENT MODERN OPEN TECHNOLOGIES

Your Tasks

- USE GEMATIK AND KBV STANDARDS TO CONNECT HEALTH APPLICATIONS AND SERVICES
- IMPLEMENT MATRIX-BASED COMMUNICATION PLATFORMS, JITSI-TELEMEDICINE, IDENTITY AND API SERVICES FOR HEALTH PROFESSIONALS AND PATIENTS
- VALIDATE TECHNOLOGY STACKS ACCORDING TO GMP

Your Profile

- DEVELOPER / ENGINEER FAMILIAR WITH SOFTWARE PATTERNS
- FAMILIAR WITH PYTHON, JAVA AND/OR RUST
- FAMILIAR OR WILLING TO LEARN GERMAN HEALTH CARE TECHNOLOGY PRACTICES, MEDICAL STANDARDS AND DEVELOPMENT PROCESSES



DEVOPS ENGINEER (WORKING STUDENT, JUNIOR, SENIOR)

YOUR MISSION

- DESIGN WORLD LEADING DEVELOPMENT AND OPERATIONS PIPELINES
- DESIGN HIGH SECURITY DevOps PIPELINES
- ALLOW HEALTH PRODUCTS TO SHIP FASTER TO HEALTH PROFESSIONALS AND PATIENTS
- EASE THE LIFE OF INNOVATION TEAMS

Your Tasks

- DESING, IMPLEMENT AND OPERATE DEVOPS PIPELINES USING OPEN- SOURCE TOOLS
- VALIDATE DEVOPS AND APPLICATION SERVICE AUTOMATICALLY
- ENABLE MONITORING AND SECURITY OF HYBRID CLOUD CENTERS
- BUILD AN OPEN-SOURCE TOOLCHAIN FOR HEALTH PRODUCTS

Your Profile

- IAC PLATFORMS AND TOOLS, E.G. ANSIBLE OR / AND TERRAFORM
- FAMILIAR OR WILLING TO LEARN HYBRID CLOUD TECH, LIKE OPENSTACK AND KUBERNETES
- FAMILIAR WITH NATIVE LINUX OR CONTAINERIZED OPERATIONS
- FAMILIAR WITH JAVA, PYTHON AND / OR RUST

MLOPS ENGINEER (WORKING STUDENT, JUNIOR, SENIOR)

YOUR MISSION

- ENABLE WORLD LEADING MACHINE LEARNING DEVELOPMENT AND OPERATIONS PIPELINES
- DESIGN HIGH SECURITY AND VALIDATED ML SERVICE PLATFORMS
- EASE THE LIFE OF INNOVATION TEAMS, ESP. DATA SCIENTIST AND ENGINEERS

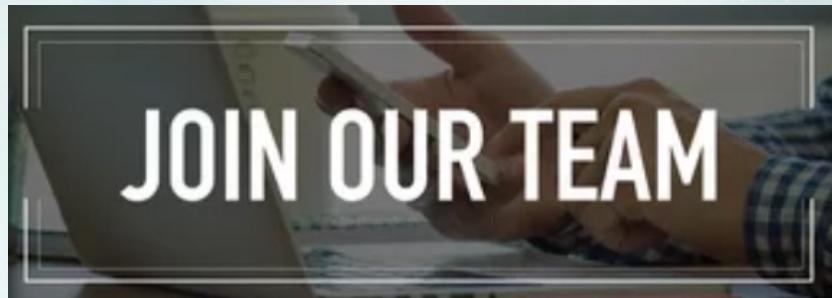
Your Tasks

- DESING, IMPLEMENT AND OPERATE MLOPs PIPELINES USING OPEN- SOURCE TOOLS
- OPERATE DATA PIPELINES AND ML FACTORIES
- VALIDATE MLOPS AND ML SERVICES AUTOMATICALLY FOR SECURITY
- BUILD AN OPEN-SOURCE ML-TOOLCHAIN FOR HEALTH PRODUCTS

Your Profile

- KNOWLEDGE IN MLOPS CLOUD TECHNOLOGIES
- KNOWLEDGE IN KUBEFLOW, MLFLOW OR OTHER STACKS
- FAMILIAR OR WILLING TO LEARN THE HEALTH AI STANDARDS AND DEVELOPMENT PROCESSES
- FAMILIAR WITH JAVA, PYTHON AND / OR RUST

Join our immersive experience and expand HUMAN HEALTH, LIVING AND WELLBEING



APPLY HERE

Include into the application E-Mail

- **Email Intro:** What to apply for? 5 Sentences - Why are you suited for the position? When can you start? What make you valuable being part of our team?
- **Short CV (1 page)**
- **Link to project(s)** on Medium, Github, Gitlab, Kaggle, Huggingface or other platforms

