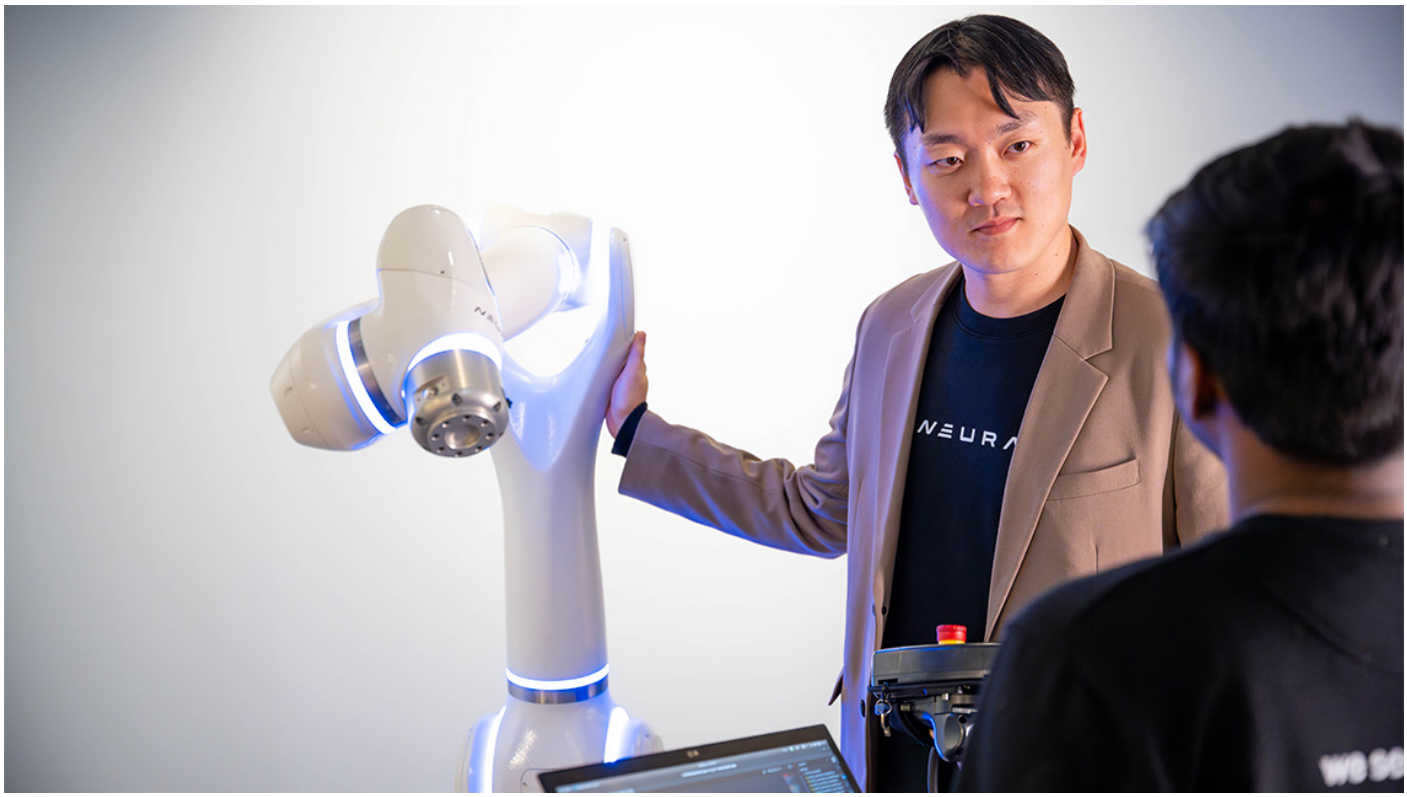

Welcome to **NEURA Robotics**, the innovator of the robotics world. Our goal is to equip collaborative robots with groundbreaking cognitive capabilities to enable safe and intuitive collaboration with humans. Under the leadership of founder David Reger, we have spent the first years of **NEURA Robotics** laying the foundations for humans and robots to work hand in hand.

"We serve humanity" is not just a motto, but our mission. Become part of our ambitious, international company and shape the future of robotics with us.

Welcome to **NEURA Robotics** - where innovation meets team spirit.

Your mission & challenges

We are growing our real-time communication capability across NEURA's current and next-generation robot platforms. This role owns the deterministic bus layer that connects the robot's real-time operating system to actuators, sensors, and the higher-level Robot Abstraction Layer — EtherCAT, PTP / gPTP, TSN, and CANfd.

You will sit between the kernel and BSP layer (where the RT & Kernel engineer owns OS scheduling and the kernel network path) and the Robot Abstraction Layer (which consumes the bus through a stable communication interface), and collaborate closely with low-level control, hardware, and safety stakeholders to deliver a communication stack that is reliable, measurable, and suitable for a controlled product lifecycle.

- EtherCAT master stack configuration and maintenance for every robot platform: cycle management, slave topology, and integrity monitoring under real workload.
- The real-time communication server that bridges the EtherCAT master to the Robot Abstraction Layer's communication interface — and its evolution as platforms and drives change.
- Servo drive bring-up and commissioning at the firmware / protocol level: drive parameterisation, CoE / SoE handling, fault and state-machine behaviour on real hardware.
- Hardware clock synchronisation (IEEE 1588 PTP, 802.1AS gPTP) and TSN traffic shaping (802.1Qbv/Qav/AS) for deterministic Ethernet on robot cells; RT network path tuning to match.
- CANfd internal bus on the Compute Unit: PHY configuration, bit-timing, frame handling, and bus-level diagnostics.
- Co-review of WCET budgets and cycle timing with the RT & Kernel engineer at the OS / fieldbus boundary, ensuring scheduling, interrupt, and synchronisation assumptions hold under load.
- Measurement and diagnostic tooling for RT communication integrity (latency, jitter, missed cycles), giving dependent teams a shared, evidence-based view of timing.
- Safety- and certification-relevant design participation, documentation, and traceability for the communication path; technical documentation kept current for the wider engineering organisation.

What we can look forward to

- Hands-on experience with industrial EtherCAT master stacks (open-source or commercial) on real hardware — not configuration only.
- Servo drive commissioning experience using EtherCAT-based protocols (CoE / CANopen over EtherCAT, SoE / Sercos over EtherCAT), including drive parameter handling and state-machine debugging.
- Implementation-level experience with IEEE 1588 / PTP clock synchronisation on real hardware. TSN stack configuration experience: 802.1Qbv/Qav/AS traffic shaping and gPTP hardware timestamping.
- CANfd protocol working knowledge: PHY configuration, bit-timing calculation, CANfd frame handling vs classic CAN 2.0.
- Solid C and C++ at the RT networking / embedded protocol boundary; practical scripting for engineering workflows.
- A collaborative working style: shared design, constructive code review, proactive communication, and reliable coordination across kernel, control, and hardware disciplines. Strong teamwork is essential for this role.
- Bachelor's degree in a relevant field, or equivalent practical experience.

Nice to Have

- Experience with industrial Ethernet ecosystems and infrastructure (Cisco Industrial, B&R X20, Hirschmann, or Beckhoff EK1100 series).
- Servo drive commissioning experience with vendors such as Synapticon or Beckhoff.
- Familiarity with real-time Linux network path tuning and interrupt coalescing.
- Exposure to functional safety engineering practices for deterministic communication paths — documentation, evidence, review cycles. Certification sign-off is not required for this role.
- Background in robotics, motion control, or industrial automation with strict timing expectations.
- Interest in growing scope as the platform team expands.

What you can look forward to

- Become part of an agile company, actively shape topics and benefit from flat hierarchies in a highly motivated team
- Enjoy an attractive salary, flexible working hours and 30 days of vacation
- The freedom to contribute your own ideas and drive them forward
- Celebrate successes together with company events
- Take advantage of our corporate benefits program
- And even more fun with great colleagues

Apply

We are looking forward to meeting you and shaping the future of robotics together. Are you in?

Couldn’t find a suitable position? Please send us an unsolicited application.
We are always looking for passionate tech enthusiasts to help us revolutionize the world of robotics!


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